

गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार

पुस्तक-वितरण की तिथि नीचे संक्षिप्त है ।

इस तिथि सहित १५वें दिन तक यह पुस्तक पुस्तकालय में  
वापिस आ जानी चाहिए । अन्यथा ५ पैसे प्रतिदिन के हिसाब  
से बिलम्ब-दण्ड लगेगा ।

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THE  
CYCLOPÆDIA;

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OF

Arts, Sciences, and Literature.

BY

ABRAHAM REES, D.D. F.R.S. F.L.S. *Amert. Soc.*

WITH THE ASSISTANCE OF

EMINENT PROFESSIONAL GENTLEMEN.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS,

BY THE MOST DISTINGUISHED ARTISTS.

PLATES. VOL. III.

HYDRAULICS — NAVAL ARCHITECTURE.

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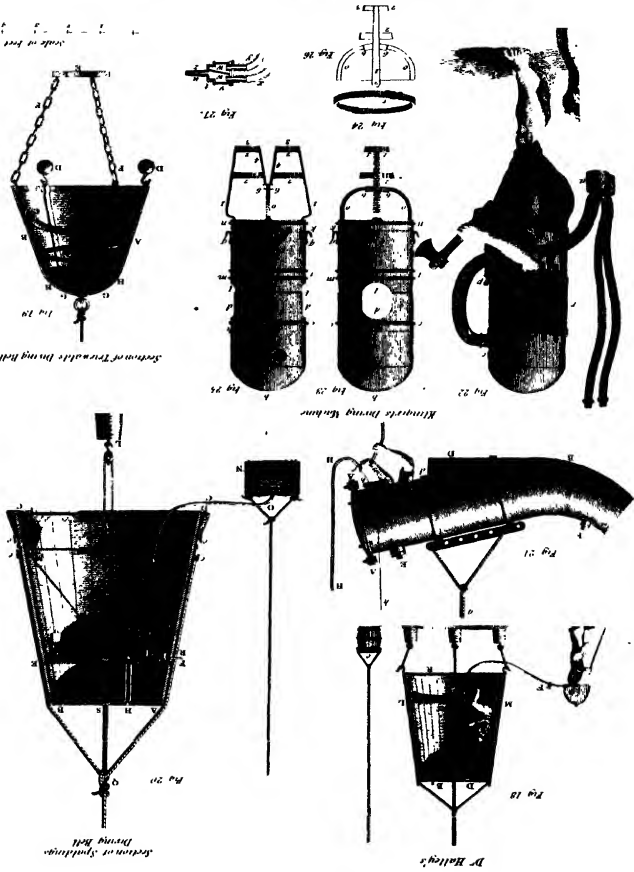






# HYDRAC-TICS.

## DIPPING BELLS.



Published by J. B. Johnson, 1011 1/2 Broadway, New York, N. Y.

1890

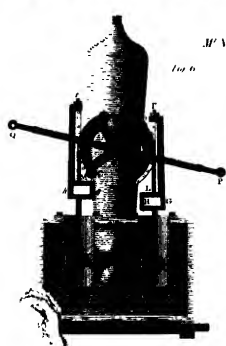
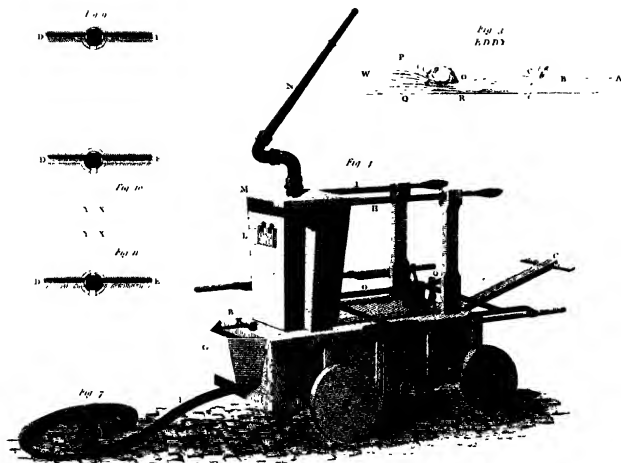






# HYDRAULICS.

PLATE III\*



*W. Vansham's Fire Engine*

Fig. 14

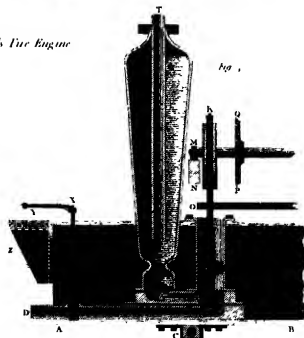


Fig. 15

2

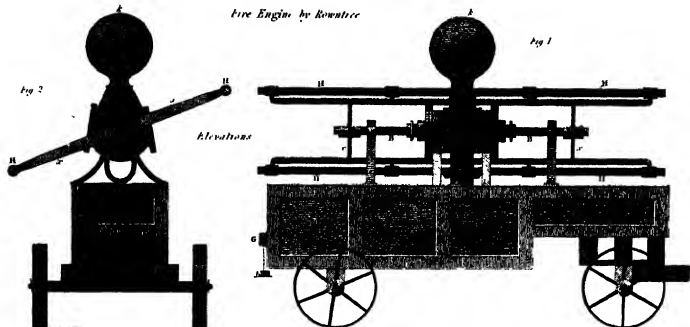
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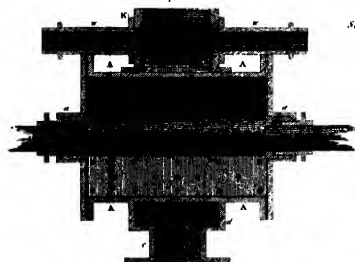
# HYDRAULICS.

PLATE 11

*Fire Engine by Rowntree*

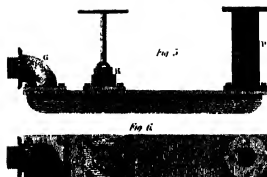
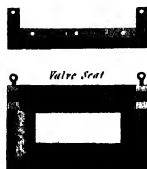
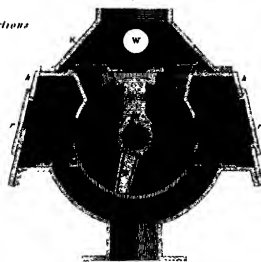


*Fig. 3*



*Fig. 4*

*Sections*





# HYDRAULICS. PLATE I.

PLATE I.

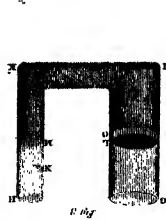


Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.

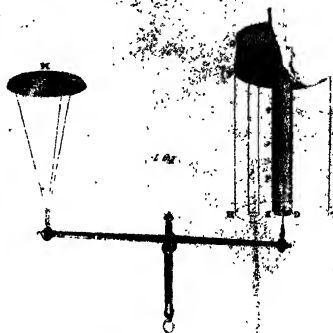


Fig. 8.

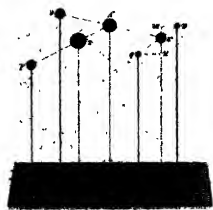


Fig. 9.

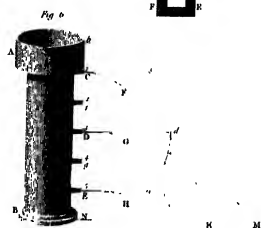
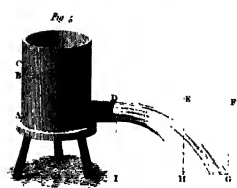
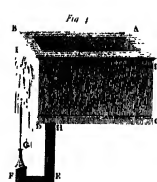
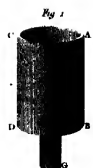
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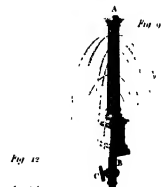
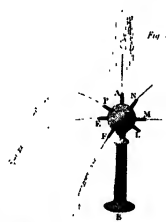
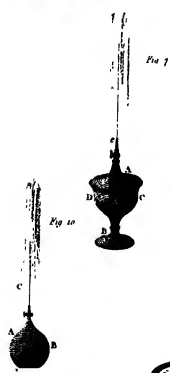


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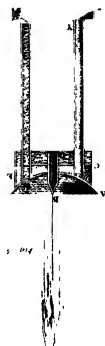
PLATE VI



## FOUNTAIN







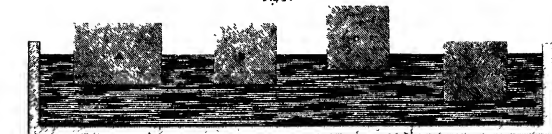


# HYDRAULICS.

## FLOATING.

PL. VIII.

Fig 1.



## HERO'S CROWN.

Fig 2

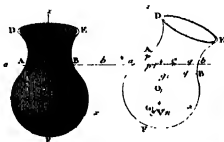
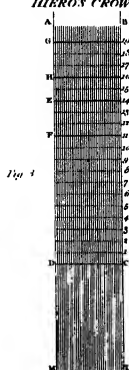
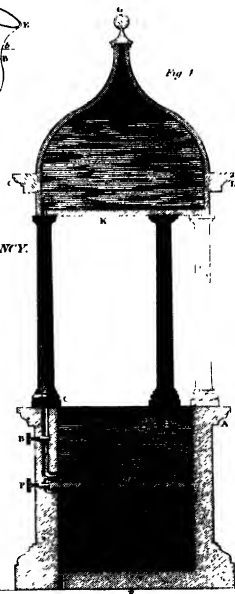
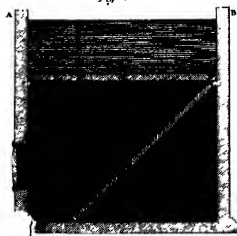


Fig 1



## HYDROMANCY.

Fig 1

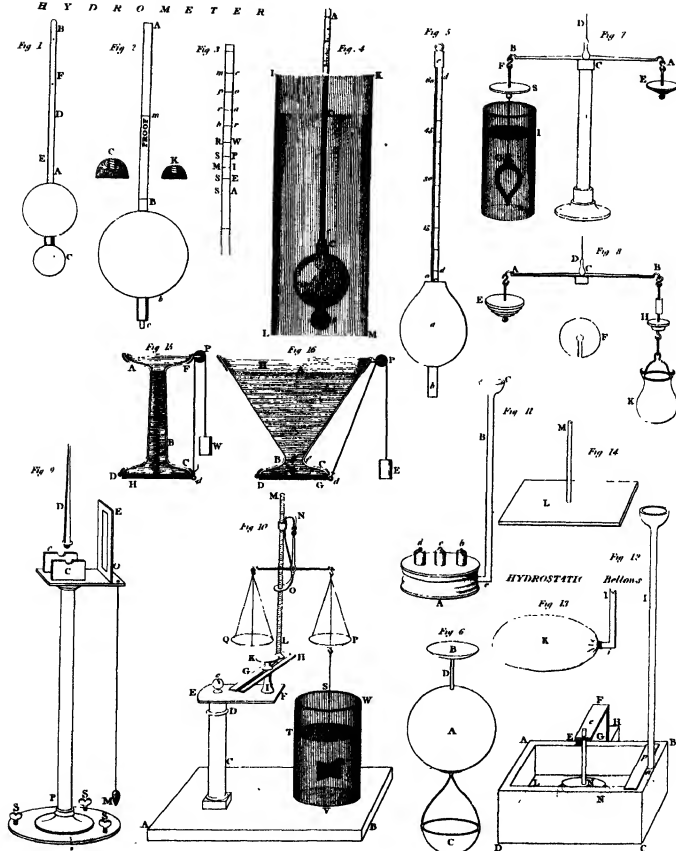




# HYDRAULICS. HYDROMETER &c.

PLATE LX

## HYDROMETER



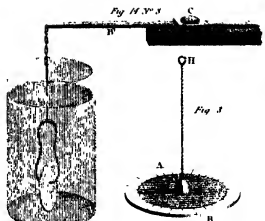
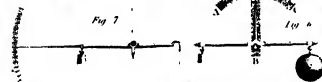
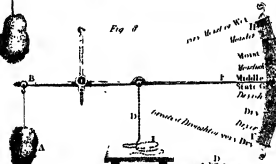
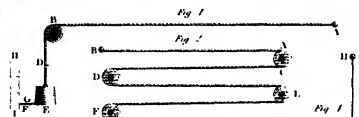


# HYDRAULICS.

PLATE .XII & XIII

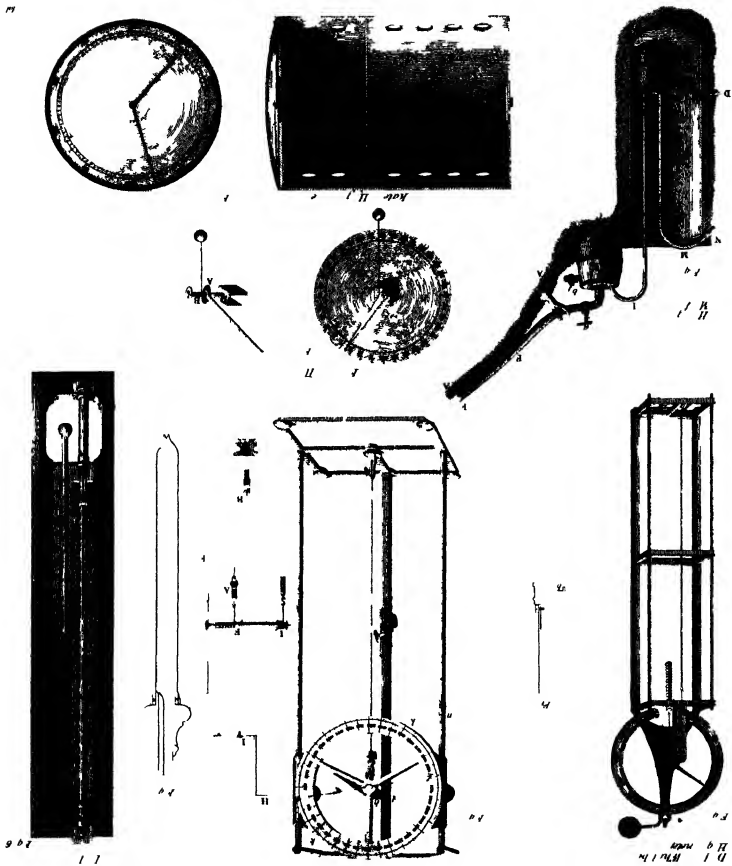
## HYGROMETER

Breadford's HYDROSTATICAL Instrument Fig. 11.

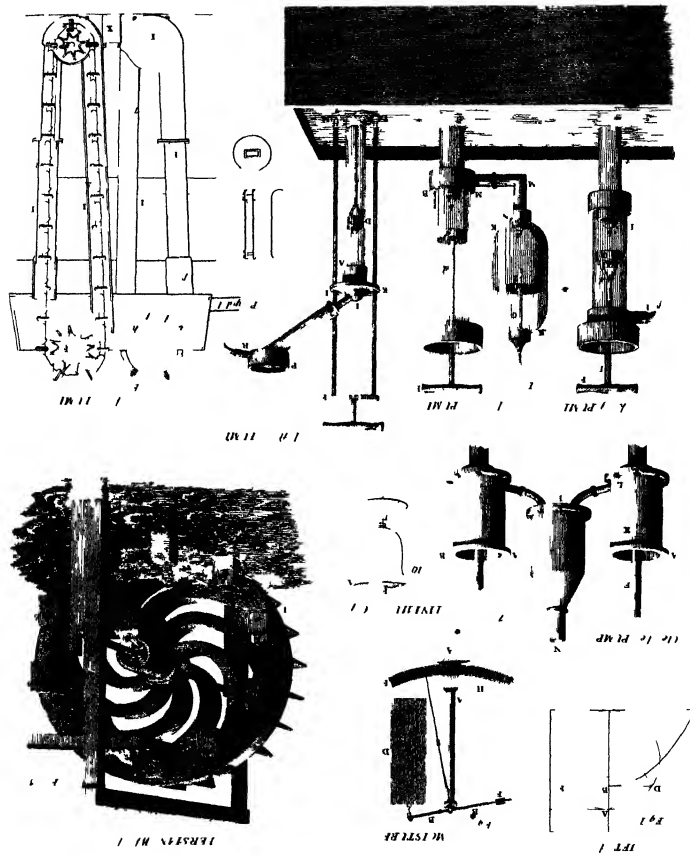




# HYDRAULIC S HYGROMETER







Published by the U.S. Government Printing Office, Washington, D.C., 1900.

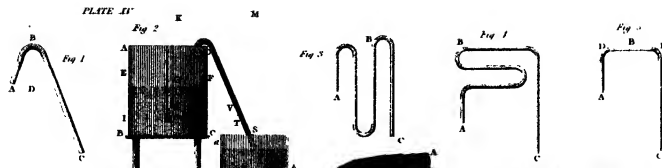


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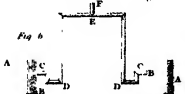
PLATE III & IV

## SIPHON

PLATE II



SIPHON Wittenbergensis



SPRINGS

Fig 8



Fig 10 SYRINGE



Fig 12



Fig 14



WAVE



PLATE III ROPE Pump

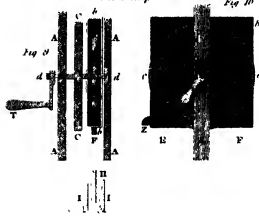


Fig 18

Fig 19



Fig 21



Archimedes' SCREW

Fig 23



Fig 25

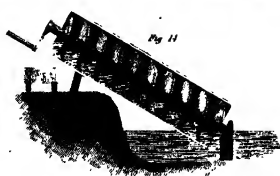


Fig 27

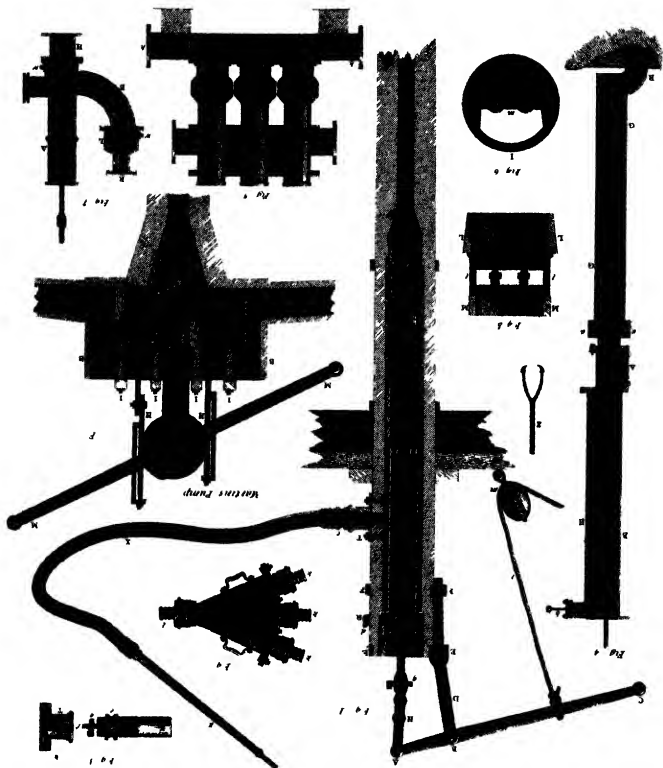




## SYNOPSIS

*Id Ns*

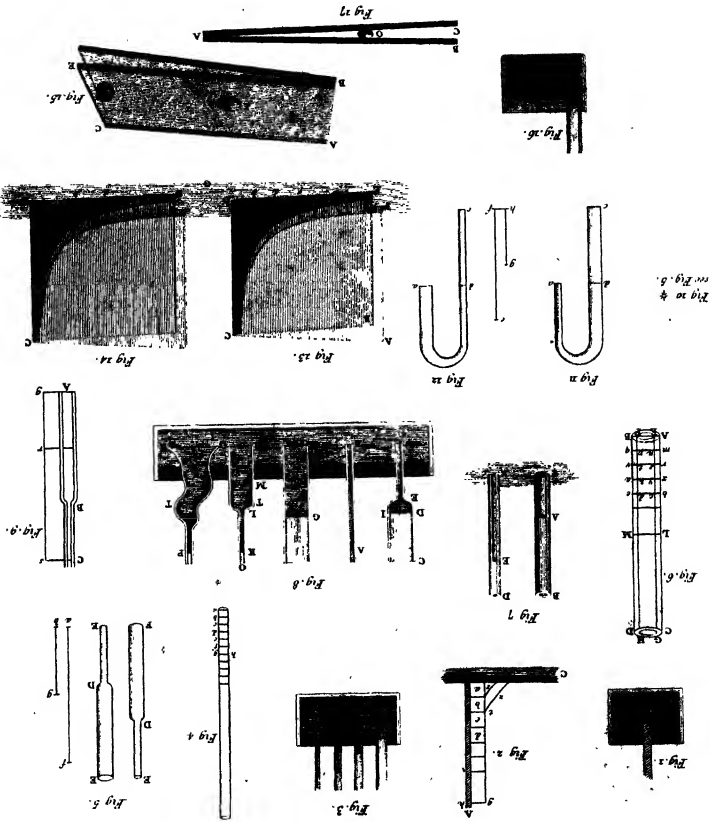
City, County, and State





# HYDROSTATICS.

PLATE I.



Also find at the Atterbury Mass. State by Longman, Reed, New & Stone, Providence, R.I.

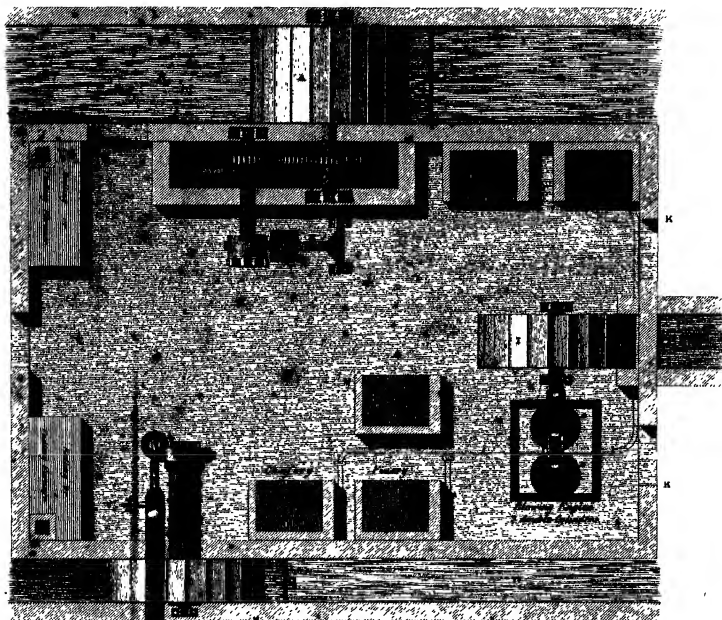
Designed by William Lewis



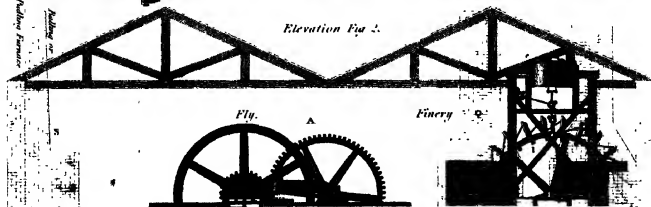
# IRON MANUFACTURE.

PLATE I.

Fig 1. Plan of an Iron Forge



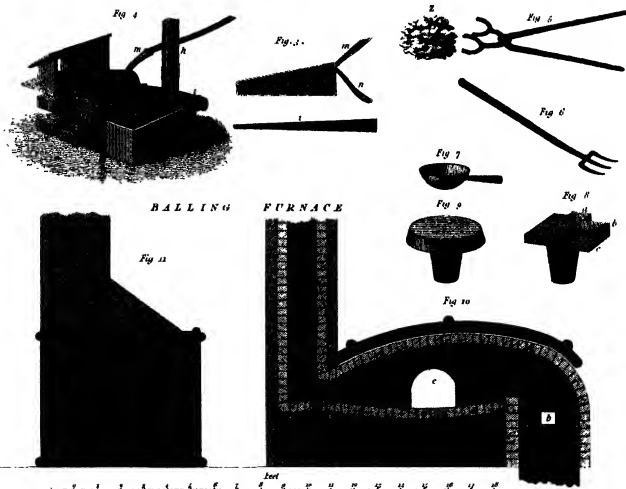
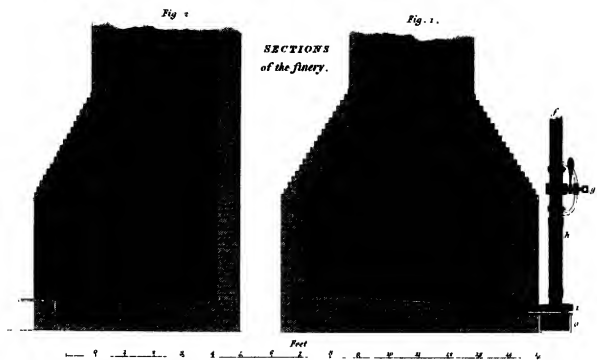
Elevation Fig 2.



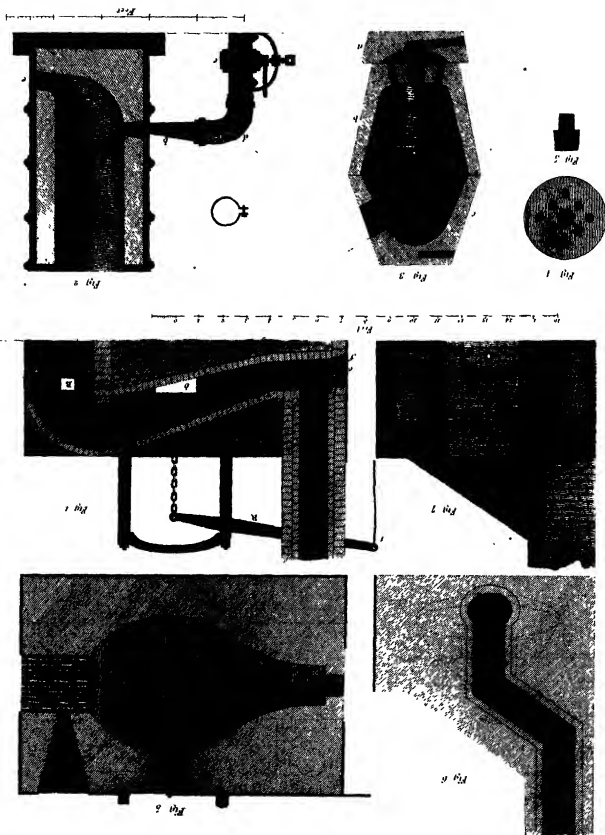


# IRON MANUFACTURE .

PLATE II .





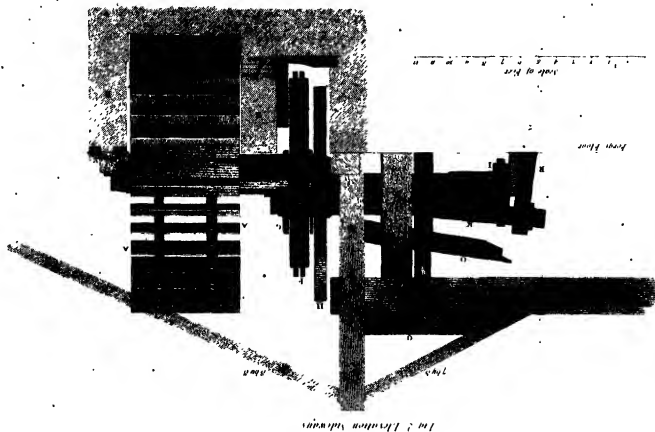
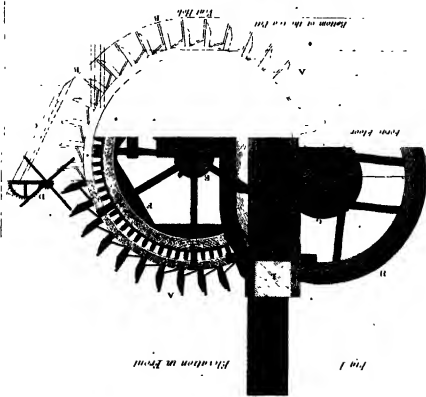


FURNACE.



# IRON MANUFACTURE.

Mr. Sawney's Design for the Machinery of the Blasture at Whitwell Forge.

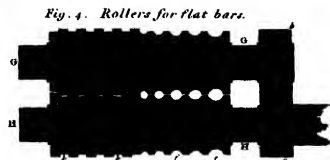
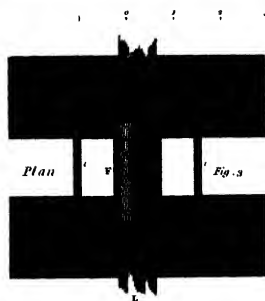
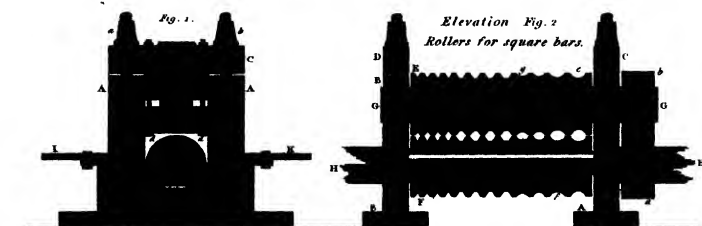




# IRON MANUFACTURE.

PLATE V.

## ROLLERS for making BAR IRON



## Plate Roller.

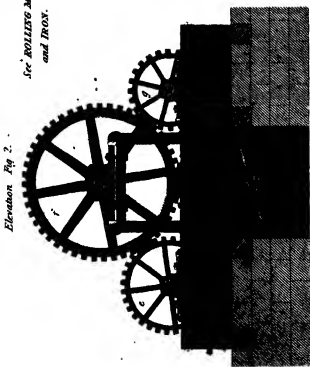




**IRON MANUFACTURE:**  
*Rolling and Slitting Mill, at Messrs' Works, Botherham*

PLATE IV.

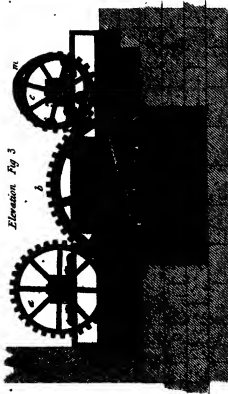
*Elevation Fig 2.*  
*See ROLLING MILL*  
*and IRON.*



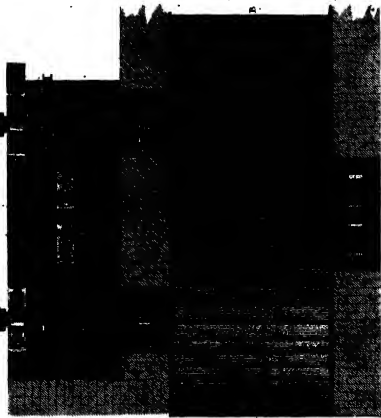
*Scale of Feet*

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

*Elevation Fig 3*



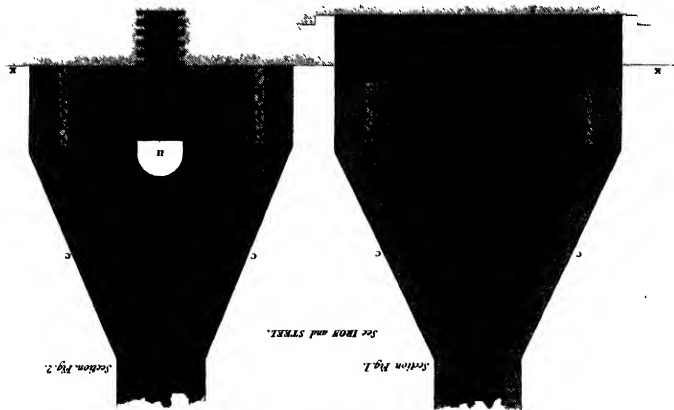
*Plan. Fig 1.*



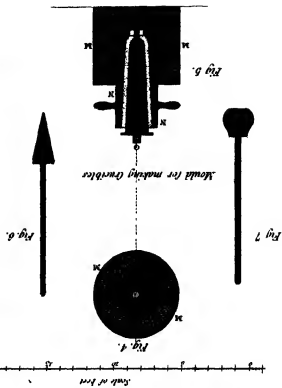


# IRON MANUFACTURE.

## STEEL CONVERTING FURNACE.



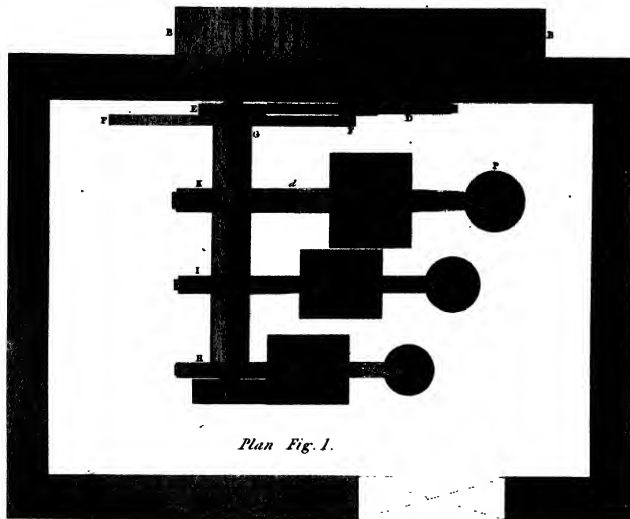
See IRON and STEEL.





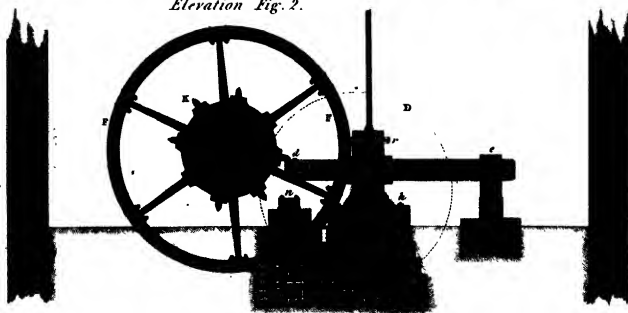
IRON MANUFACTURE.  
MILL FOR TILTING STEEL,  
by M. Smeaton.

PLATE VIII.



Plan Fig. 1.

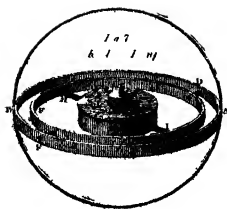
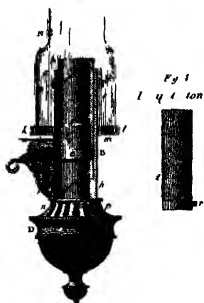
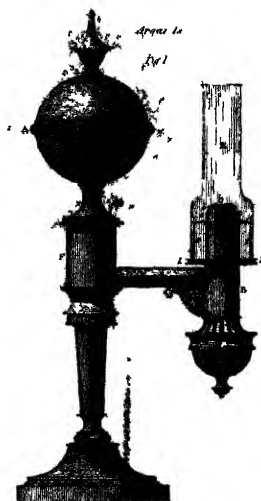
Elevation Fig. 2.





# LAMPS.

11111



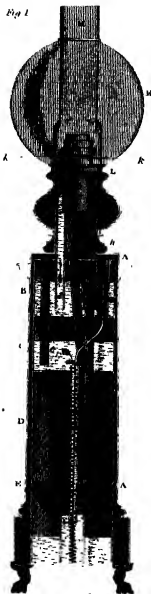


# LAMPS.

PLATE II.

*Hydro Pneumatic Lamp by R. W. King.*

*Fig 1*



*Fig 2*



*Fig 3*



*Fig 4*



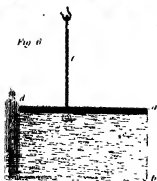
*Fig 5*

*Mc Barton's Lamp.*

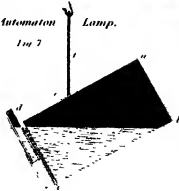


*Potter's Automaton Lamp.*

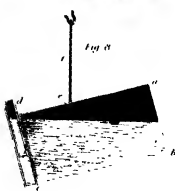
*Fig 6*



*Fig 7*



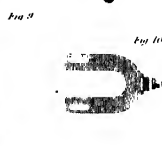
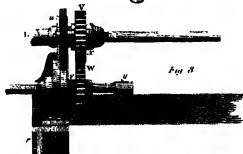
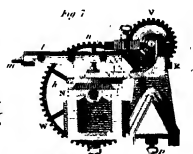
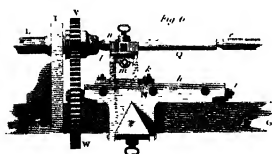
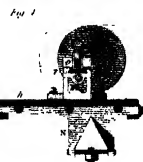
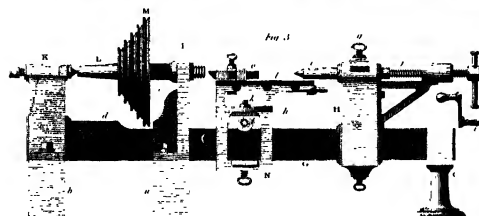
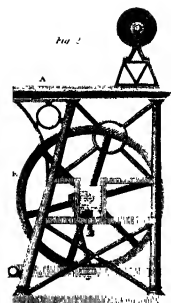
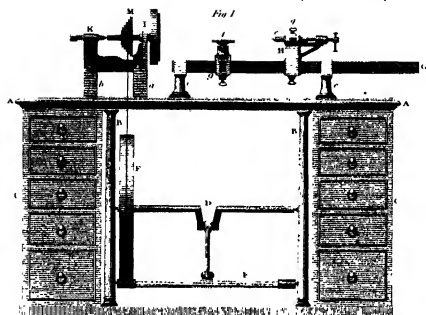
*Fig 8*





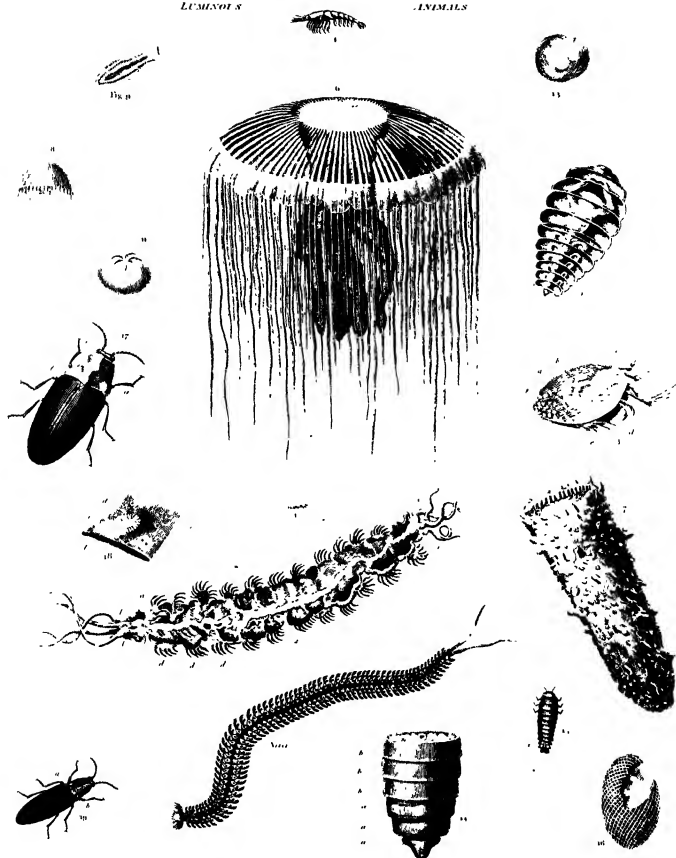
# LATHE.

by M<sup>r</sup> H. Maudslay





LUMINOUS LIGHT ANIMALS





# LIGHT HOUSE.

*LIGHT HOUSE on the Eddystone Rock.*

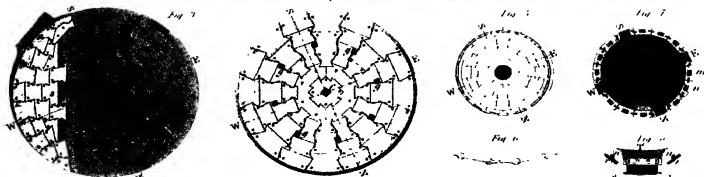
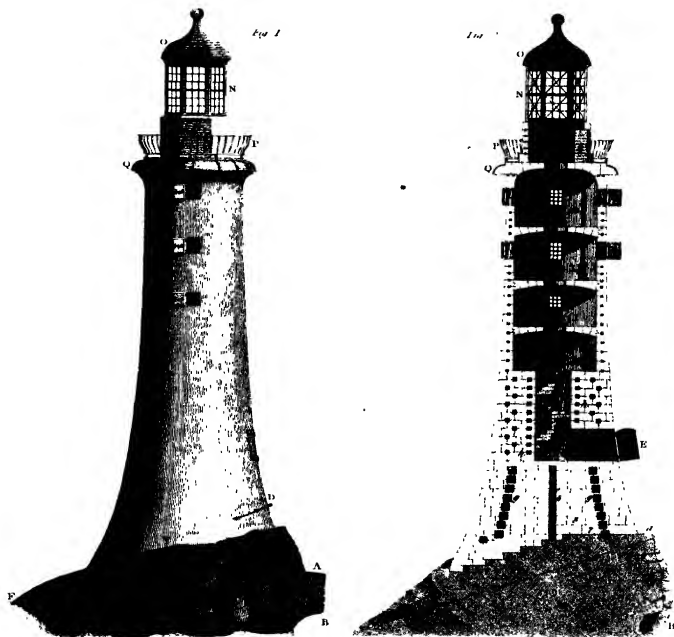


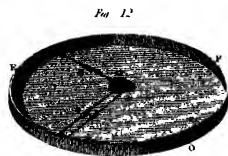
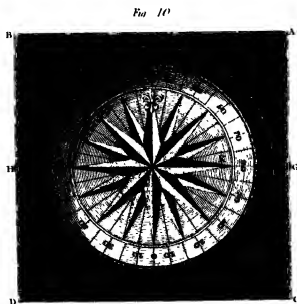
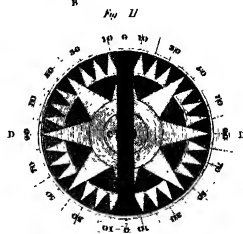
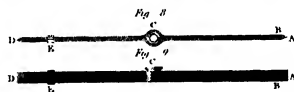
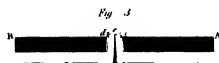
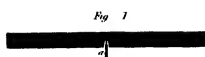
Fig. 3. Fig. 4. Fig. 5. Fig. 6. Fig. 7.



# MAGNETISM.

## COMPASS.

PLATE I





# MAGNETISM. COMPASS.

PLATE II.

Fig. H.

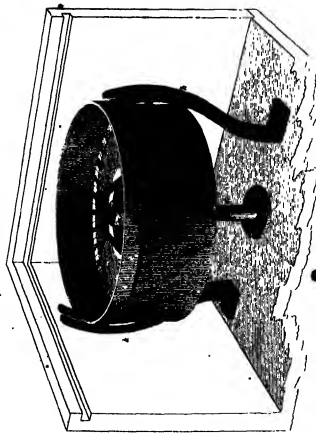


Fig. B.

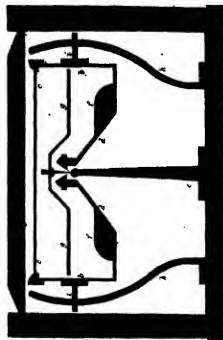


Fig. E.

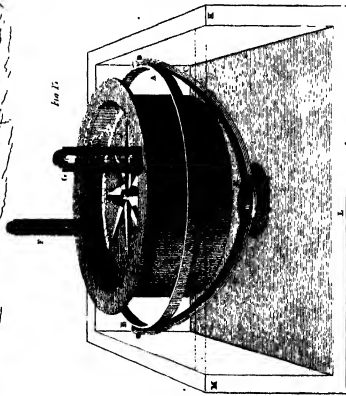
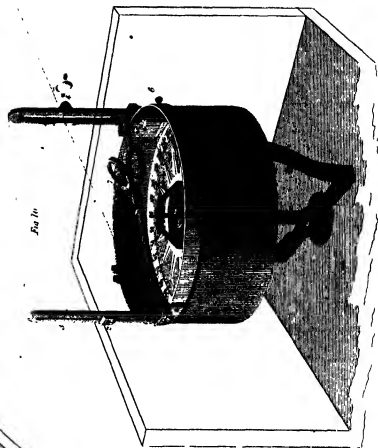


Fig. D.





# MAGNETISM.

## VARIATION COMPASS.

Fig. 18.



Fig. 20.



Fig. 22.

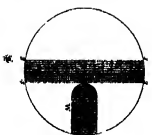
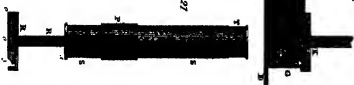


Fig. 24.



Published by the American Society of Engineers, New York, N. Y., 1880.

Revised to the 1880 edition.



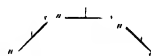
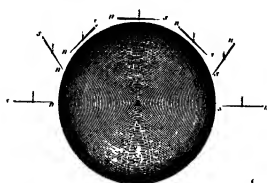
# MAGNETISM. DIPPING

PLATE II

Fig 22



Fig 23



for Fig 27, see the next Plate

Fig 20



Fig 21

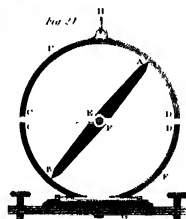


Fig 3  
Dipping Needle by W. Loomer

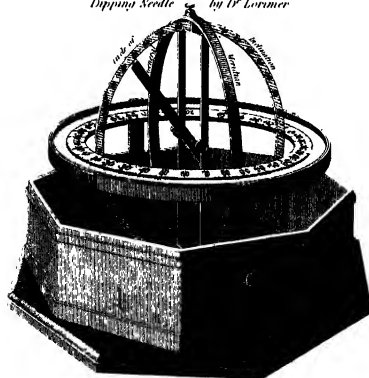


Fig 25



Fig 26



Fig 27

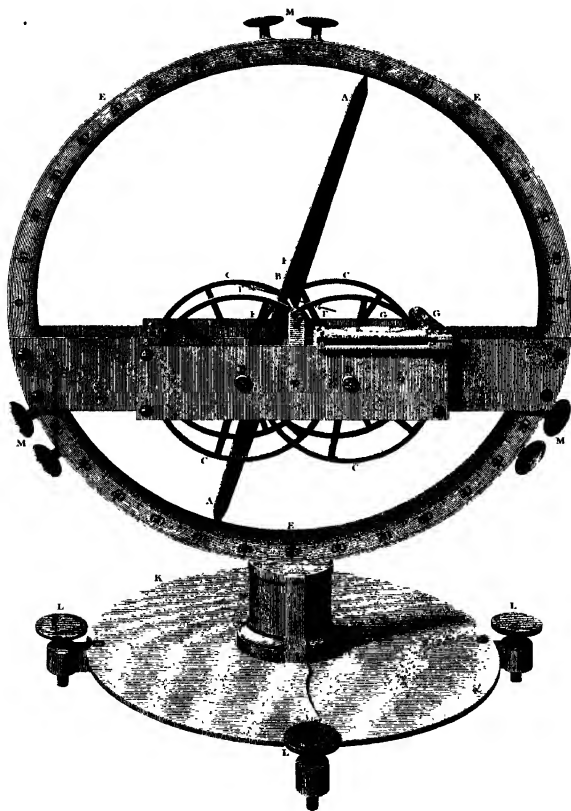




# MAGNETISM.

PLATE V.

*Dipping Circle made by M<sup>r</sup>. Adair for the Board of Longitude, on the Plan of the Rev.<sup>d</sup>. M<sup>r</sup>. Mitchell*



*Published as the Act directed, by Longman, Hurst, Roe & Orme, Stationers-Row*

*Engraved by Wilson Lowry*



# MAGNETISM. MILNET

Fig. 1



Fig. 2

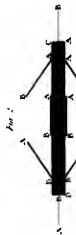


Fig. 3

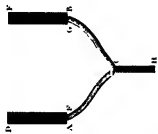


Fig. 4

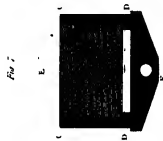


PLATE VII

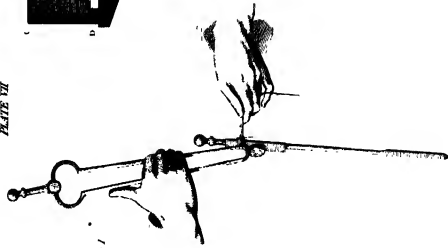


Fig. 1

Fig. 2



Fig. 3

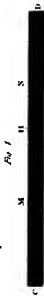


Fig. 4



Fig. 5



Fig. 6

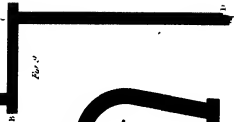


Fig. 7



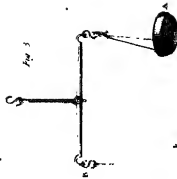
Fig. 8



Fig. 9



Fig. 10





# MAGNETISM.

## MAGNET

PLATE VII



Fig. 2

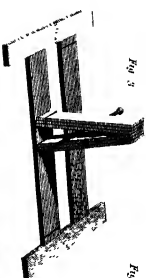


Fig. 3

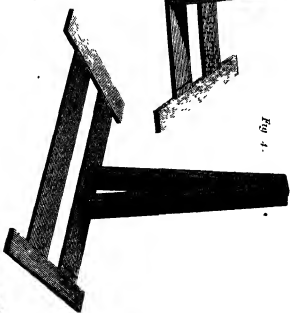


Fig. 5

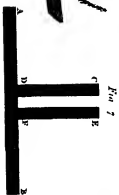


Fig. 7



Fig. 6



Fig. 10

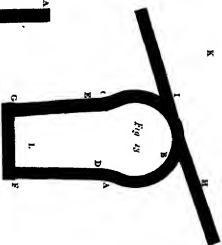


Fig. 13

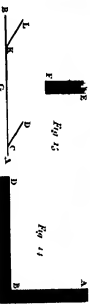


Fig. 15



Fig. 11

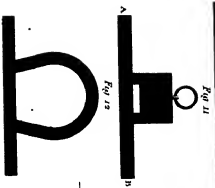


Fig. 12

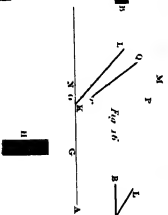


Fig. 16



Fig. 14



Fig. 8

Published under the direction of the Committee on the Magnetism of the American Association of Physicians.

Deposited by the Library.



# MASONRY.

174

Fig. 2.  
*Incertum.*

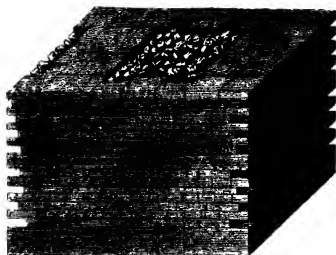


Fig. 1.  
*Reticulated.*

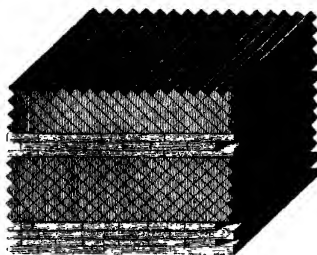


Fig. 4  
*Pseudodorum.*



Fig. 3  
*Isodorum.*

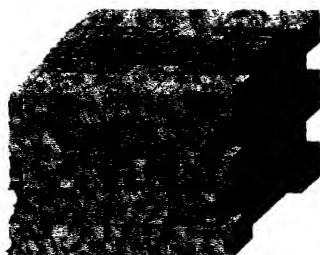
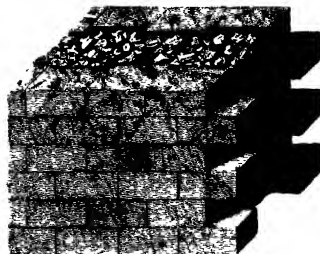


Fig. 6  
*Greek Empletion.*



Fig. 5.  
*Roman Empletion.*





# MASONRY. ARCHES

PLATE II

PLANO-CYLINDROIDIC ARCH

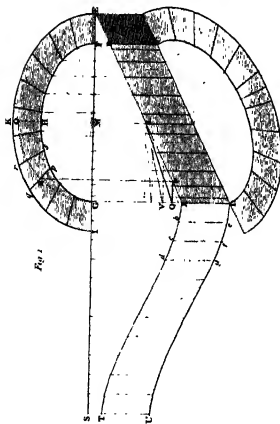


Fig. 1

PLANO-CYLINDRIC ARCH

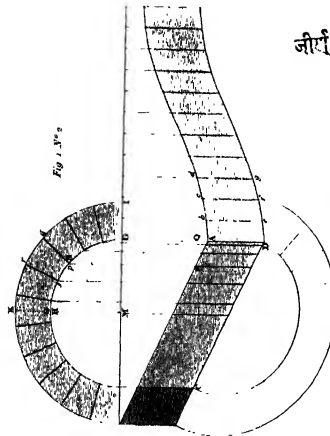


Fig. 2

CYLINDRO-CYLINDRIC

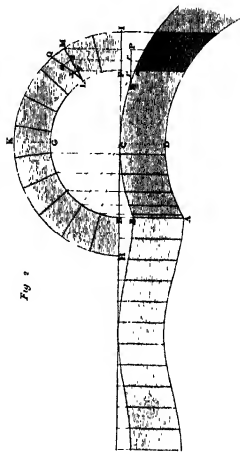


Fig. 3

CYLINDRO-CYLINDROIDIC

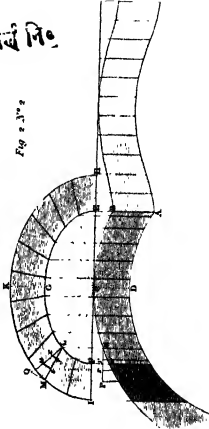
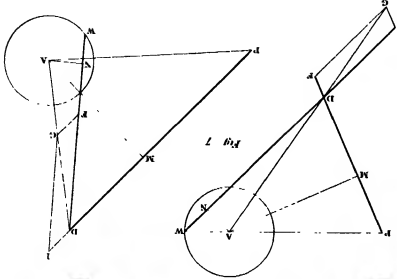
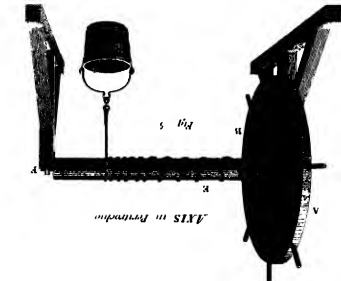
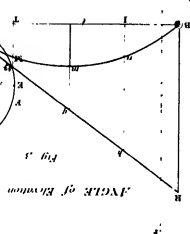
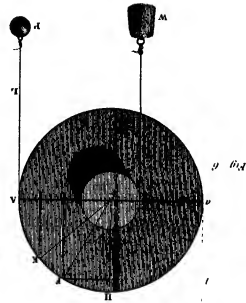
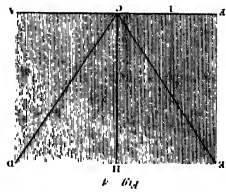
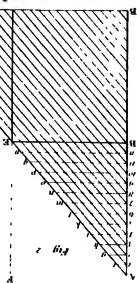
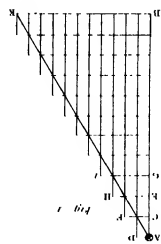


Fig. 4

जी. ई. ई. ई. ई.

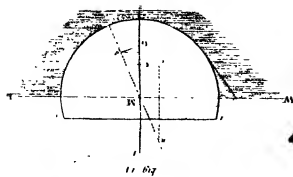
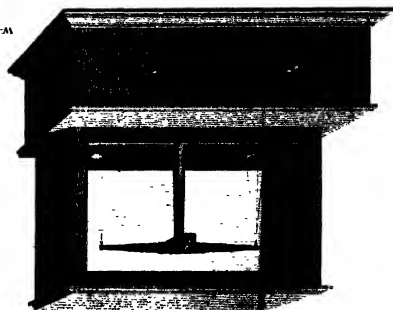
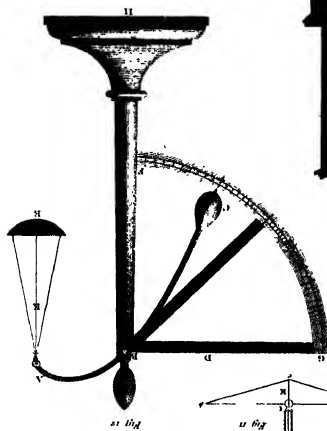
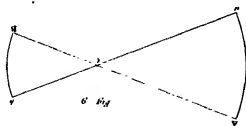
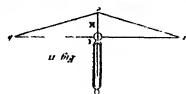
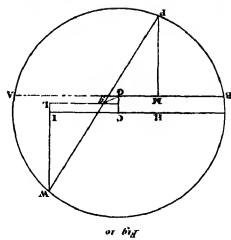
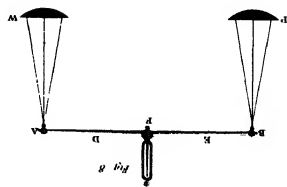






# MECHANICS.

PLATE II

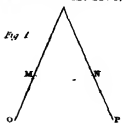


Published as the Author's own by Longman, Rees, Brown & Green, Stationers and Printers, No. 1, Strand, London.

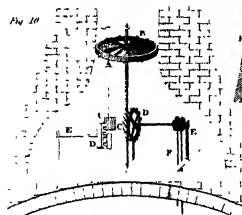
Figures of the Author's own



## Fig. 4



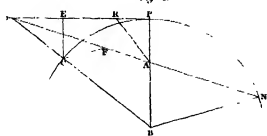
## Fig. 10



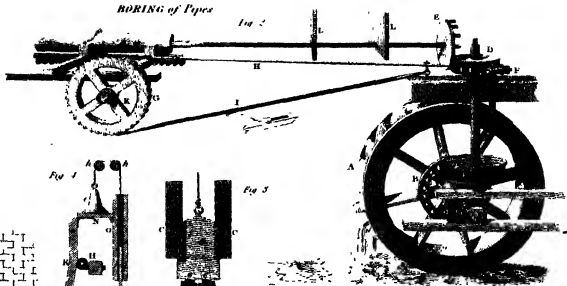
## Fig. 1



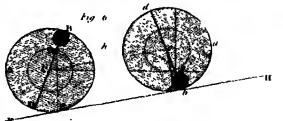
## Page 17



Log 5



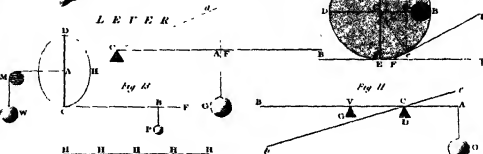
*Una*



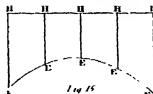
100



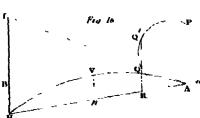
*Aug 88*



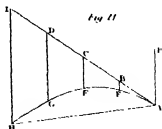
## 14915



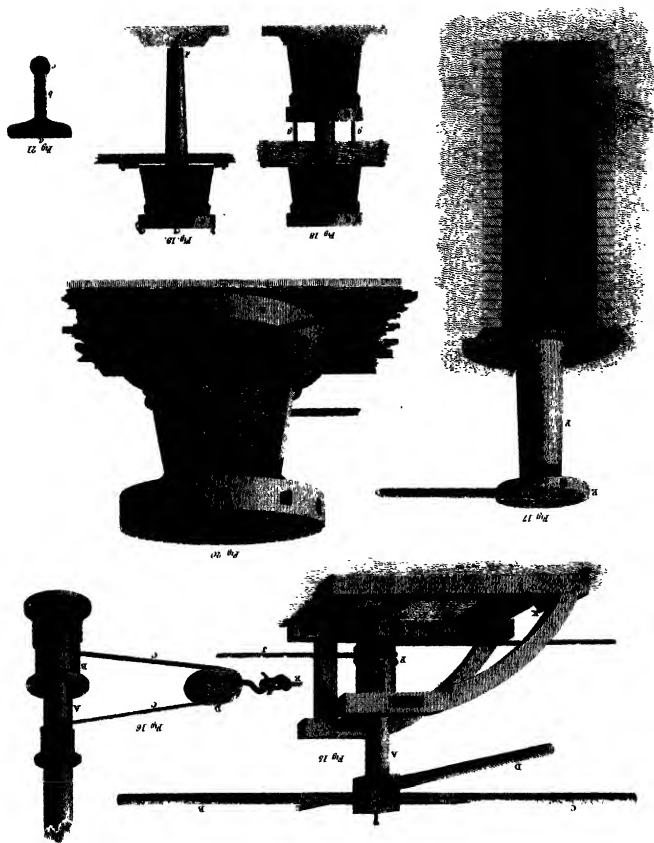
## Fig. 16



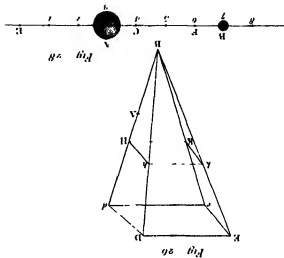
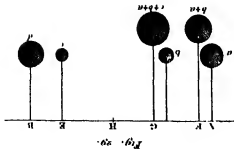
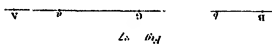
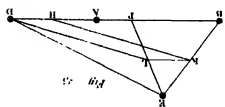
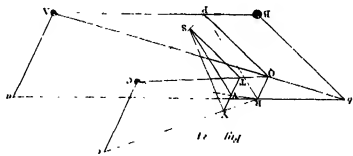
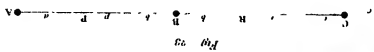
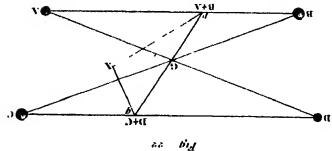
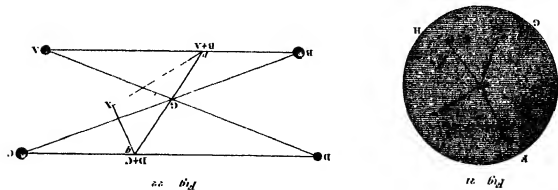
## Eq. 11













# MECHANICS.

## CENTER OF GRAVITY.

PLATE V.

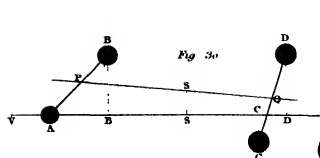


Fig. 30.

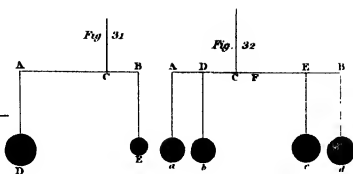


Fig. 31.

Fig. 32.

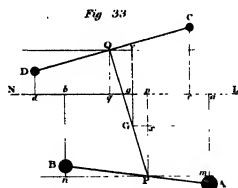


Fig. 33.

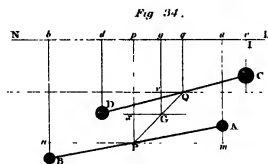


Fig. 34.

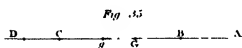


Fig. 35.

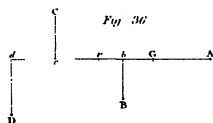


Fig. 36.

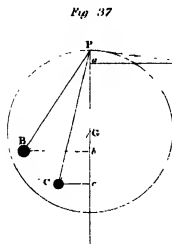


Fig. 37.

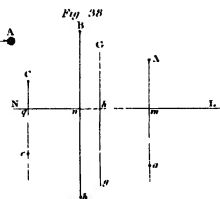


Fig. 38.

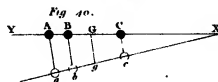


Fig. 39.

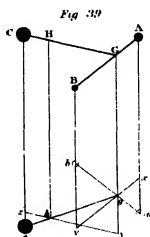


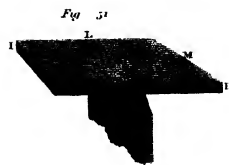
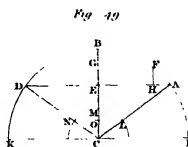
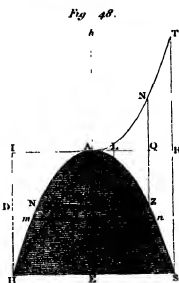
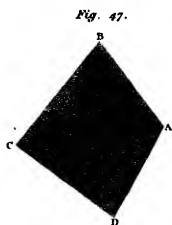
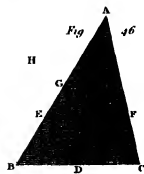
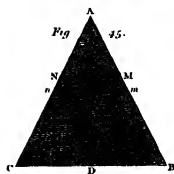
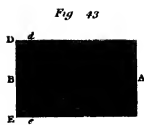
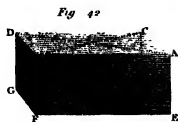
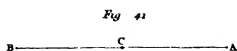
Fig. 40.



# MECHANICS.

PLATE VI

## CENTER OF GRAVITY.

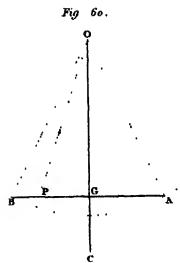
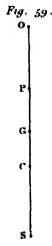
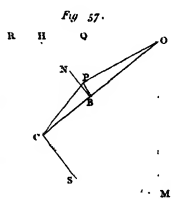
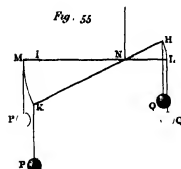
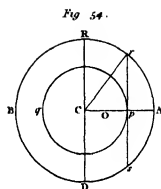
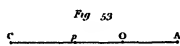
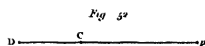




# MECHANICS.

PLATE VII. IX

CENTER OF GYRATION, OSCILLATION &c.



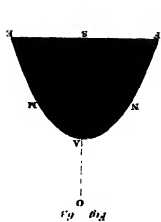
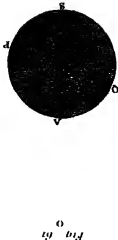
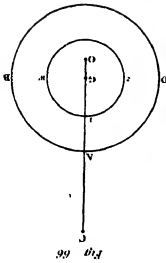
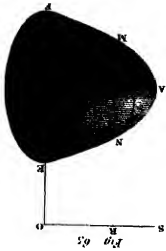
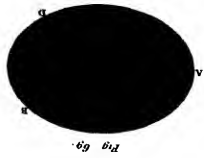
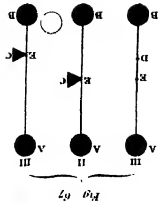


# MCHANICS.

CENTER OF OSCILLATION AND CENTER OF PERCUSSION.

PLATE VII

IX



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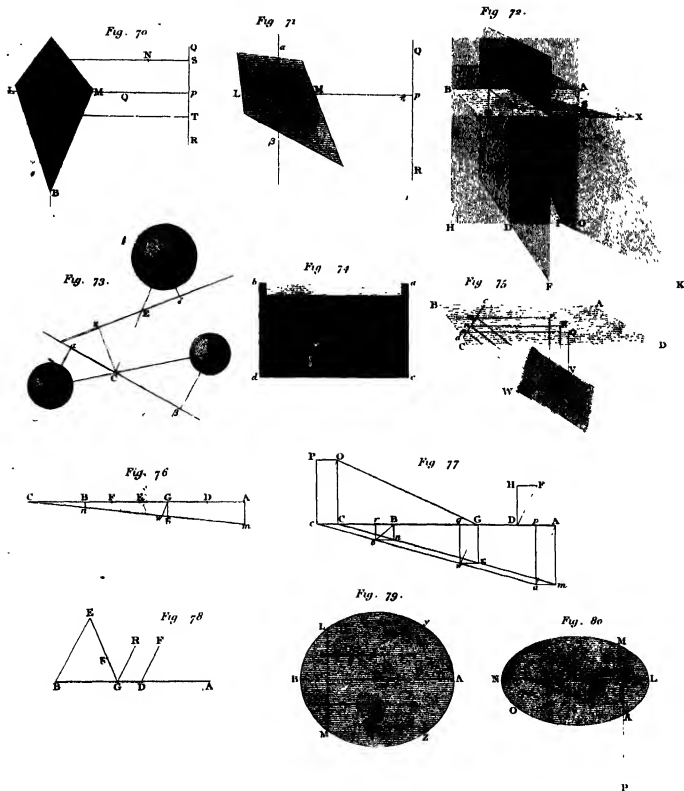
University



# MECHANICS.

PLATE IX

CENTER OF POSITION, OF PRESSURE, OF ROTATION &c.





# MECHANICS.

PLATE I

## CENTRAL, CENTRIFUGAL, AND CENTRIPETAL FORCES.

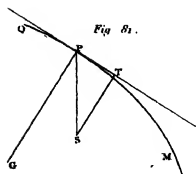


Fig. 81.

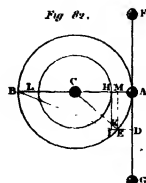


Fig. 82.

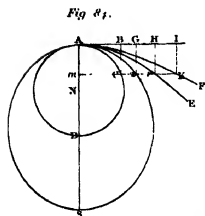
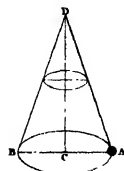


Fig. 84.

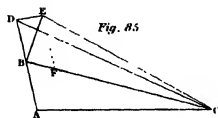


Fig. 85.

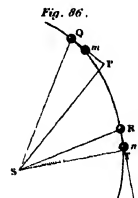


Fig. 86.

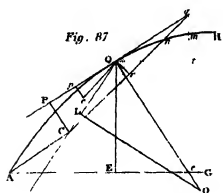


Fig. 87.

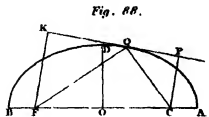


Fig. 88.

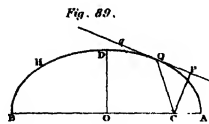


Fig. 89.

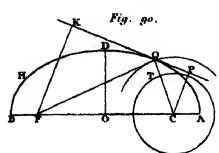


Fig. 90.

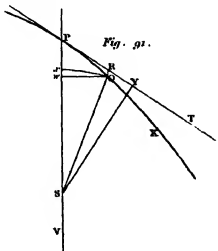


Fig. 91.

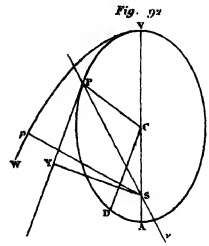
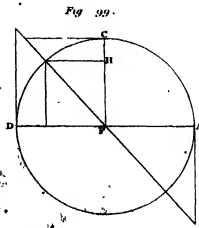
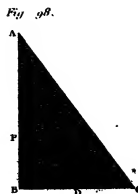
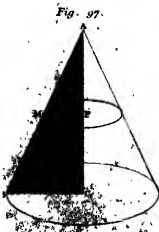
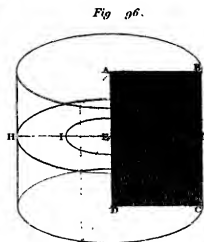
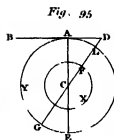
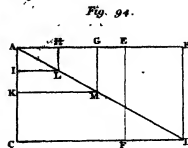
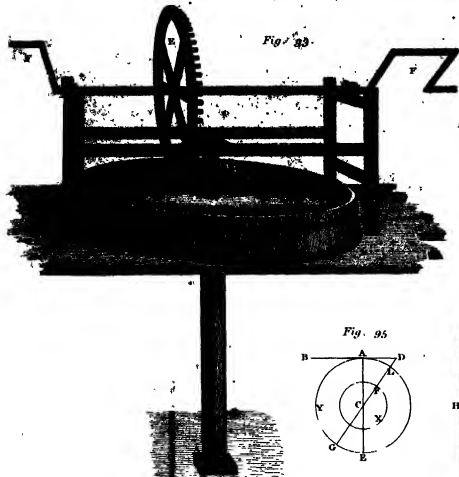


Fig. 92.



MECHANICS.

CENTRIFUGAL MACHINE AND CENTROBARYC METHOD.





# MECHANICS.

PLATE VII

## CHAINS.

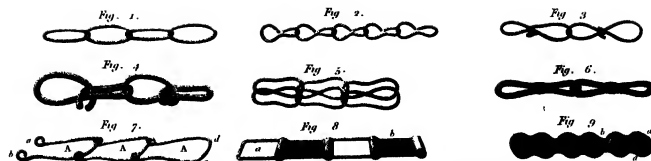


Fig. 10.  
CLAY MILL.

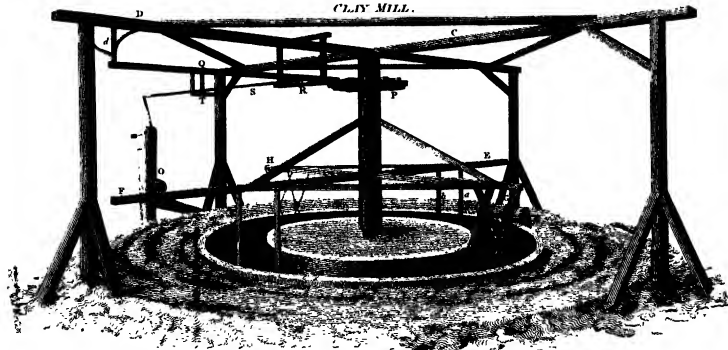
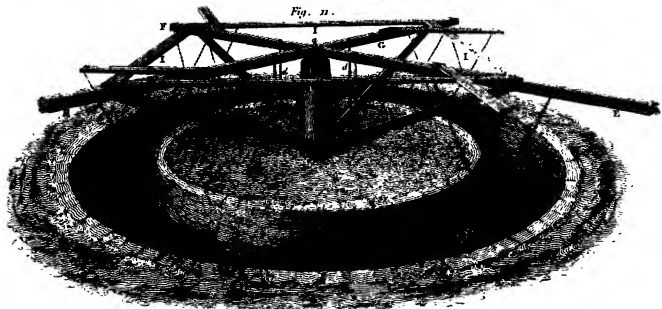


Fig. 11.

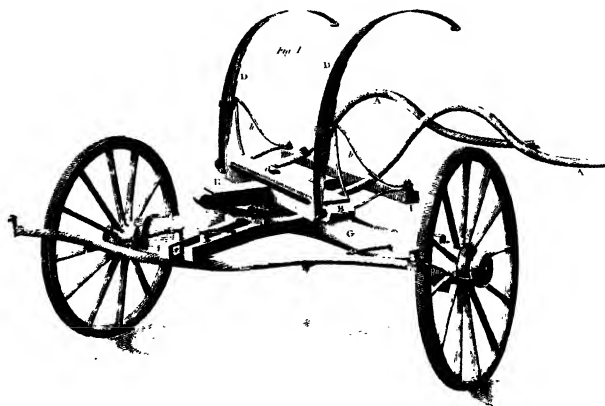




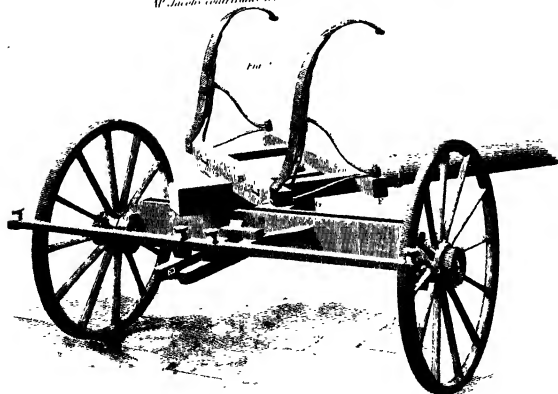
MECHANICS.  
COACH

PLATE. III

*View of the fore wheels of a time-tracked carriage*



*W. Jacobs construction for the fore wheels of a coach*





# MECHANICS.

## COAL MEASURING.

PLATE XIV.

Fig 1

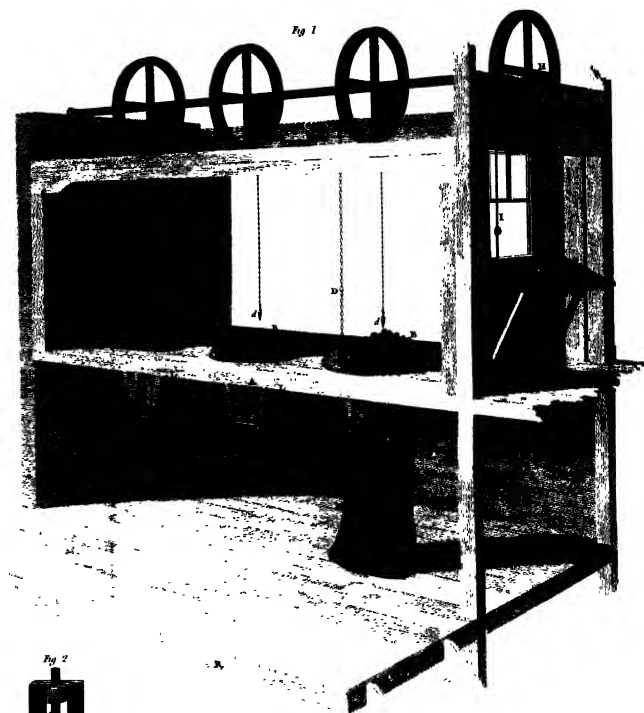


Fig 2



Ferry Jan's delin

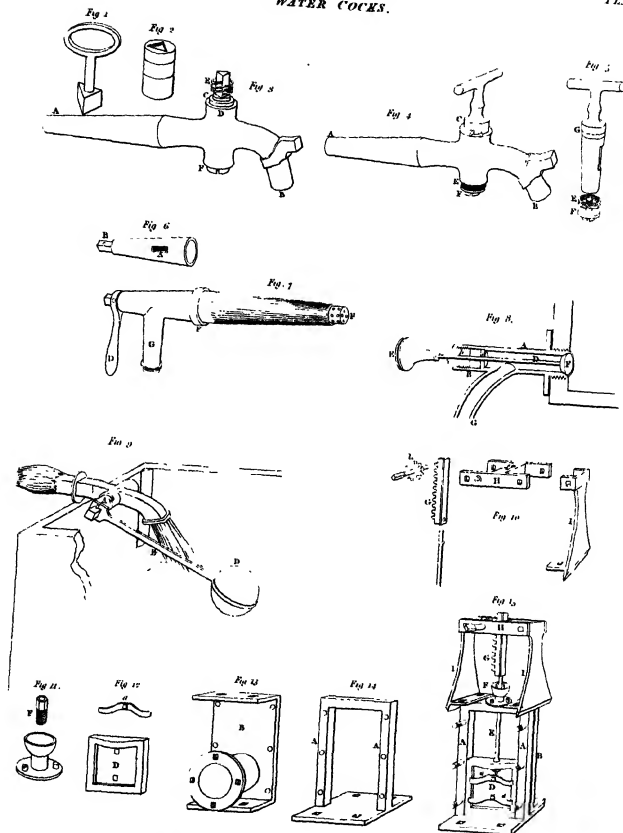
Published as the Act Direct, shop, by Longman, Hurst, Ross & Orme, Paternoster Row

Engraved by Wilson Lowry



# MECHANICS. WATER COCKS.

PLATE III.



See "See" data.

Published as the Act directs after by Longman, Hurst, Ross, Green & Brown Stationers Row

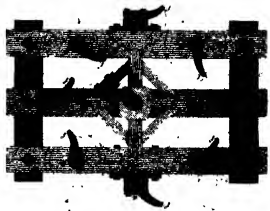
Entered at G. W. Lowry.



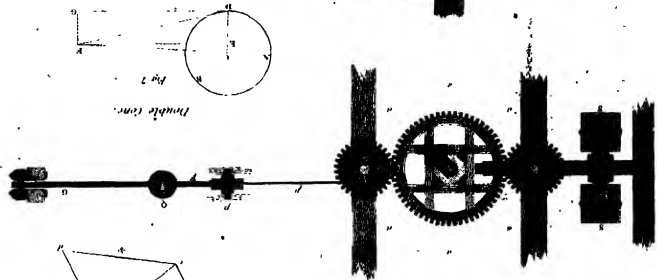
# MECHANICS.

PLATE XX.  
Revised to show the W.P. M.

Young's Modulus of Elasticity.



Plans



Double time.

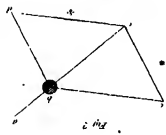


Fig. 2

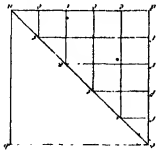
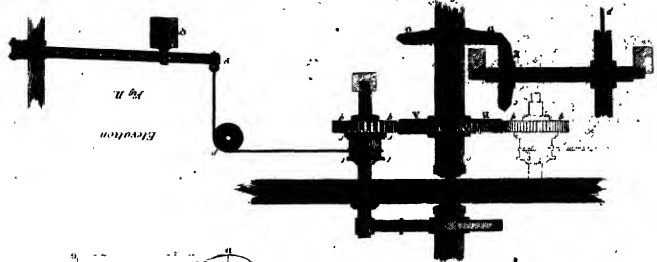


Fig. 1

Composition of Motion



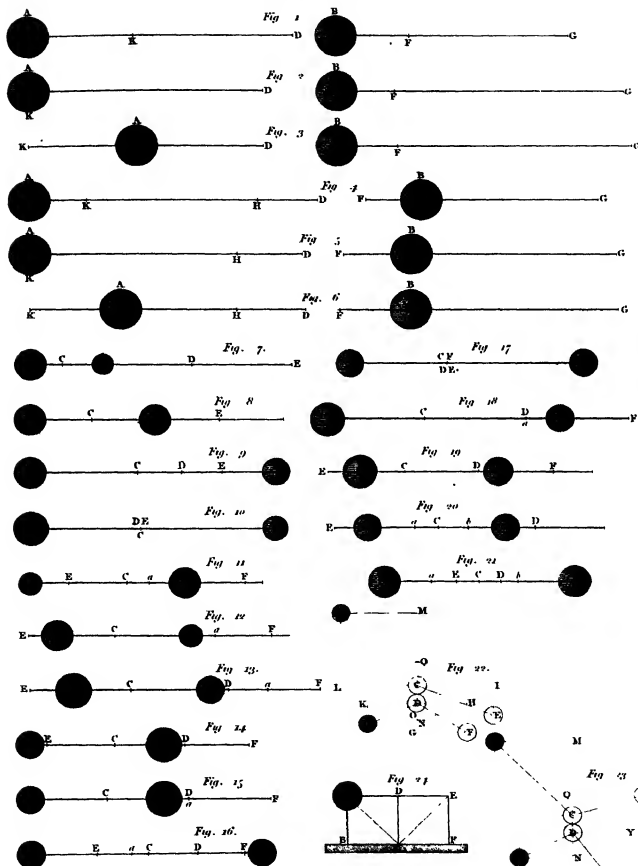
Elevation

Fig. 11.

Published at the direction of the Board of Longitude, London, 1791, by Benjamin Thomas, New London.



COLLISION





# MECHANICS. COAR MAKING.



Fig. 2

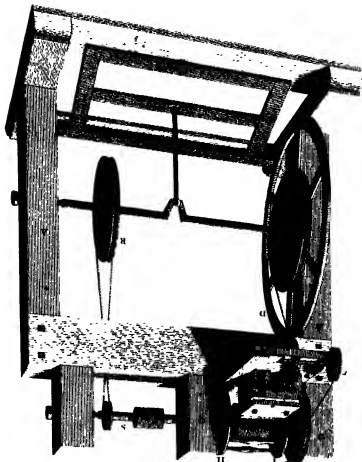


Fig. 1



Fig. 3



Fig. 4

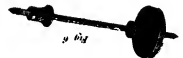


Fig. 5



Fig. 6

coupling bar



Fig. 7



Fig. 8





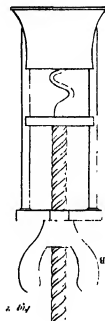


Fig. 2

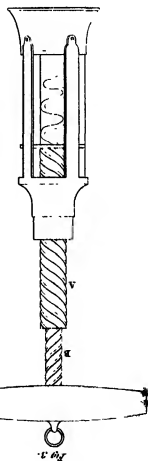


Fig. 3

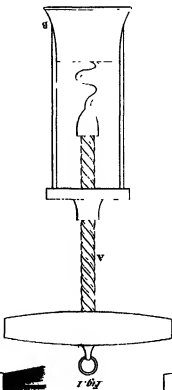


Fig. 1

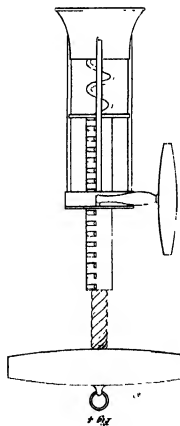


Fig. 4

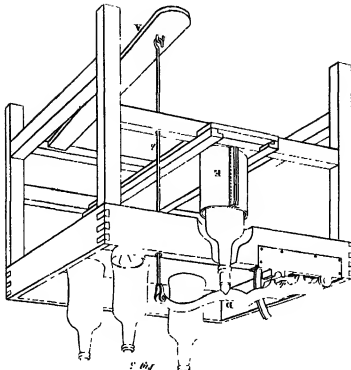


Fig. 5

Fig. 5



# MECHANICS.

## CRANES

by M<sup>r</sup> Ferguson.

PLATE XVIII

Fig. 2.

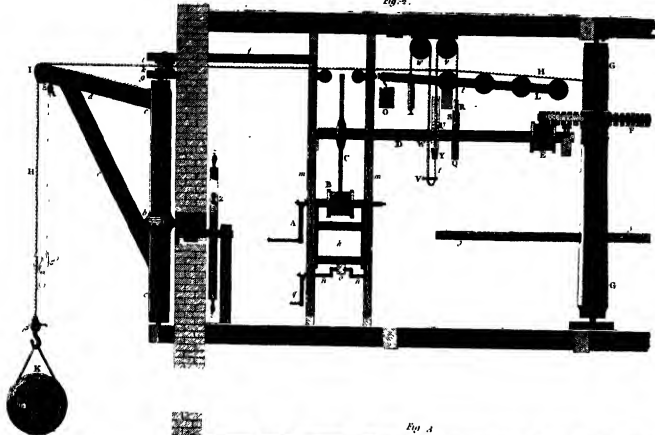
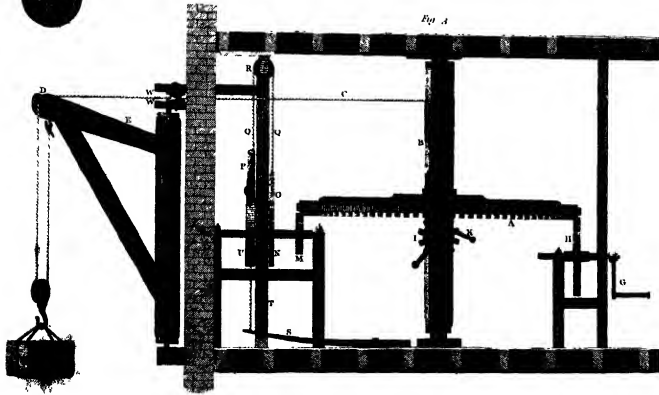


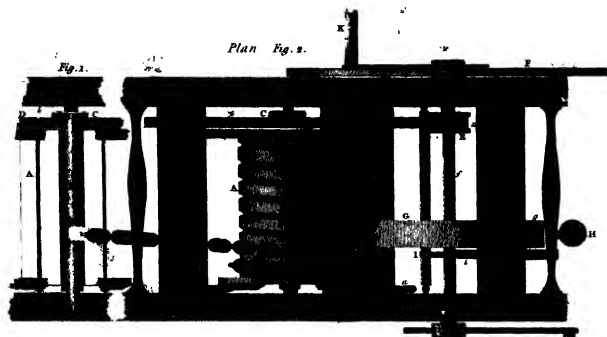
Fig. 3.



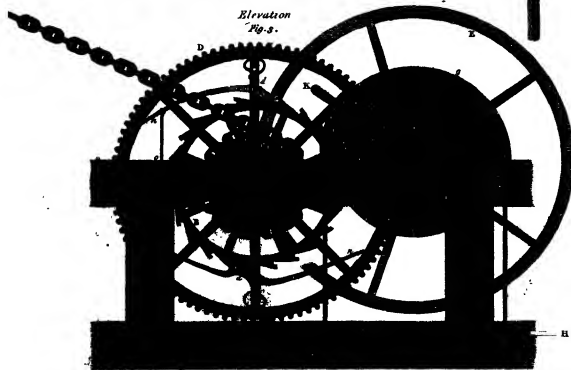


**MECHANICS.**  
**CRANES.**

PLATE XI



MR SMEATON'S design for a CRANE, for the Wool Quay, Custom House, London. 1789.



Scale of Inches.

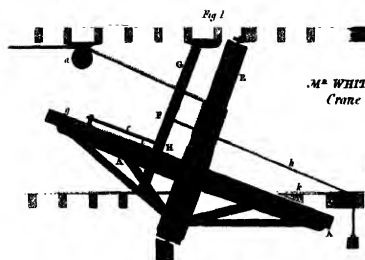
Reduced by permission from the Original Drawing in the possession of Sir Joseph Banks K.B. to J. Hurrey Junior.

Engraved by William Greay

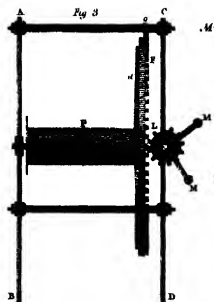
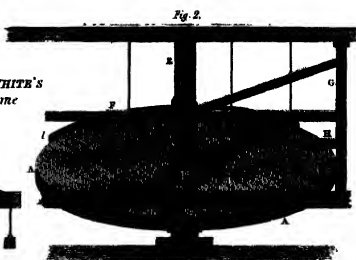


MECHANICS.  
CRANES.

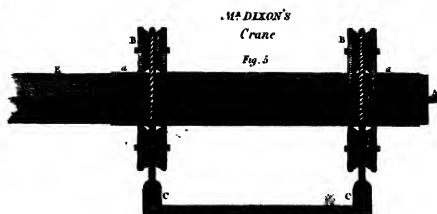
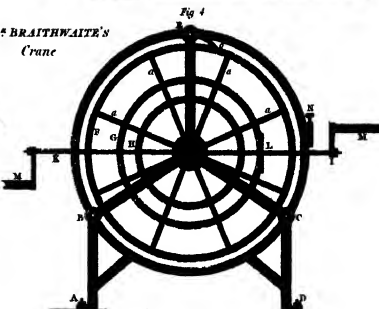
PLATE XX.



M<sup>rs</sup> WHITE'S  
Crane



M<sup>rs</sup> BRAITHWAITE'S  
Crane

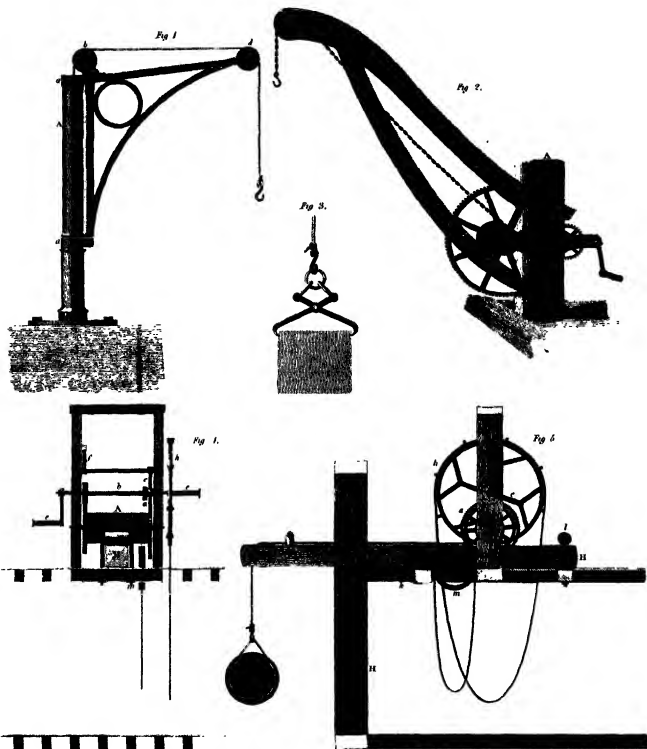


M<sup>rs</sup> DIXON'S  
Crane



MECHANICS.  
CRANES

PLATE XXI.

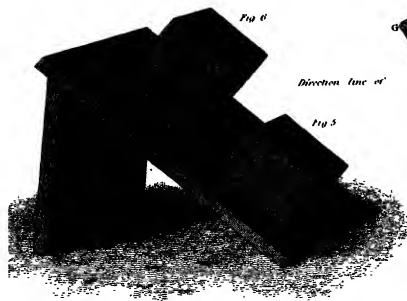
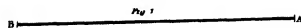




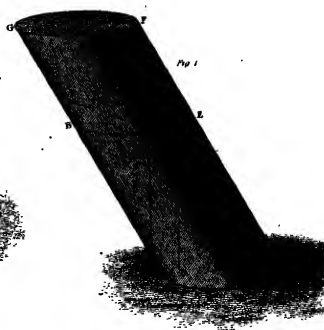
# MECHANICS.

PLATE XXII & XXIII

DIRECTION of Motion



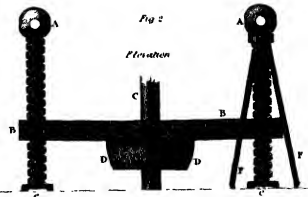
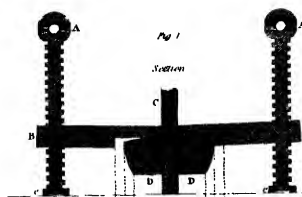
Direction line of



# MECHANICS.

Wells Machine for DRAWING out Ship Bolts

PLATE XXII



Plan of the lower Side



Plan of the upper Side



# MECHANICS.

Machine for boring cylinders at the Edison Iron Foundry, made by M. Dureau

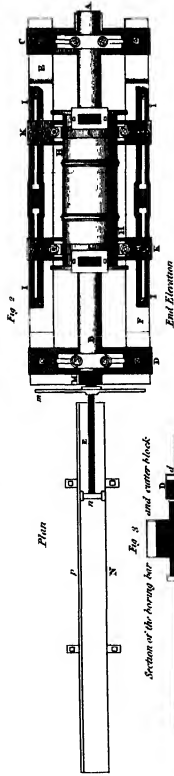
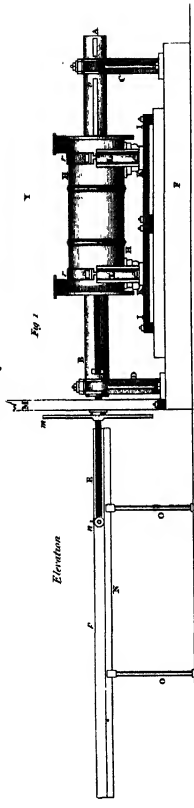


Fig. 3. Section of the boring bar and cutting block.



Fig. 6. End Elevation

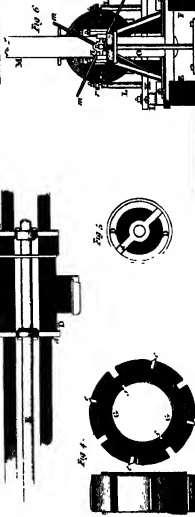
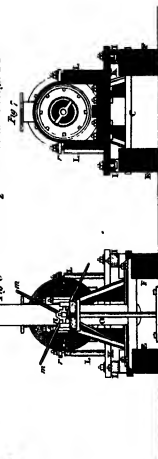


Fig. 7. Section through YZ



Scale in Feet

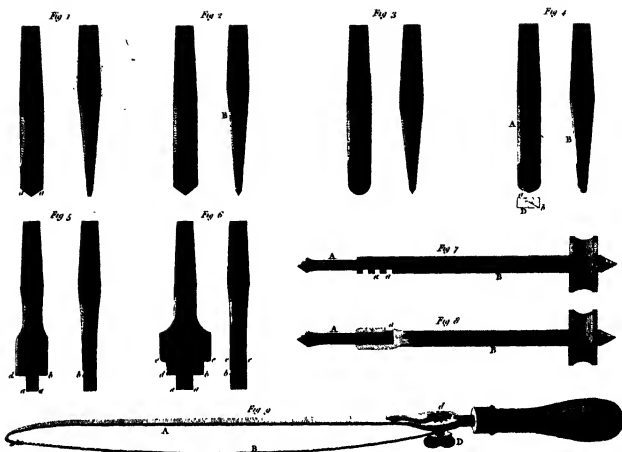




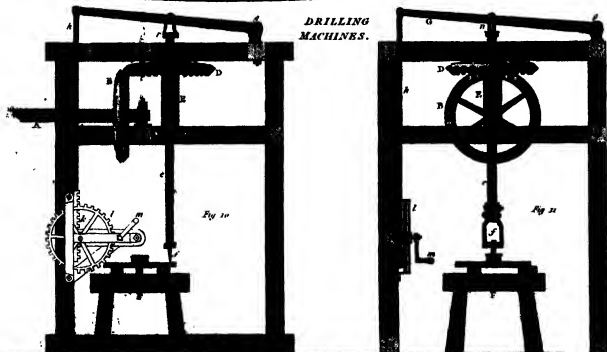
# MECHANICS.

PLATE

## DRILLS.



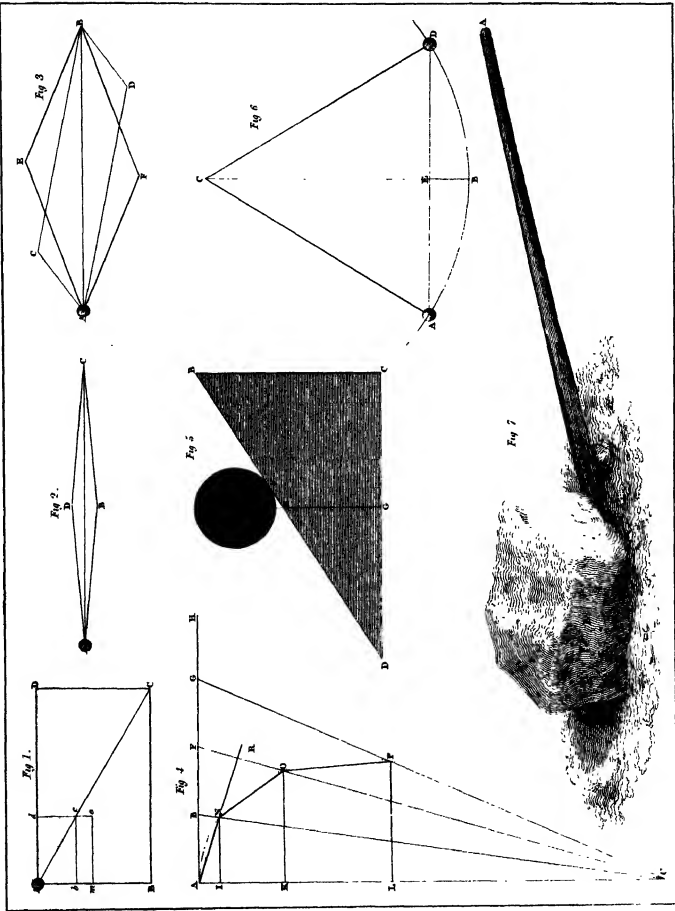
## DRILLING MACHINES.





# MECHANICS. DYNAMICS.

PLATE XIV.



Published at the *Salon de Peinture* by *L'Esprit des Sciences* Paris.

Engraved by *M. L. Lamy*.



# MECHANICAL. DYNAMOMETERS.

FOR MEASURING THE FORCE OF DRAUGHT.

PLATE XXVI.

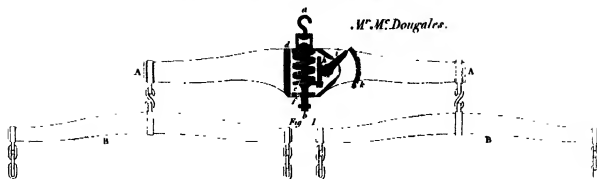


Fig 3

Mr. Salmons contrivance for determining the force required to work a Mill.

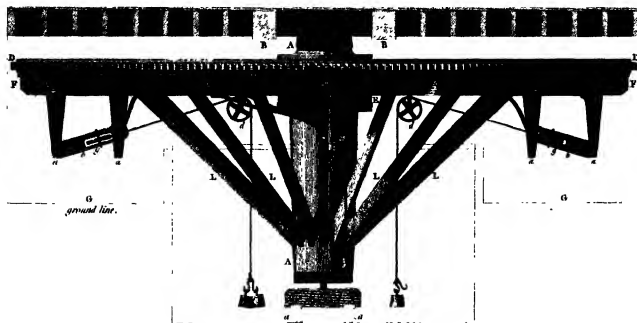
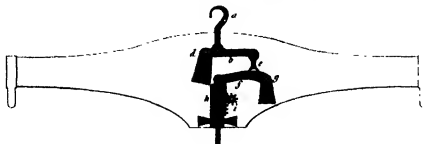


Fig 2

Mr. Salmons Dynamometer.





MECHANICS.  
EXPANDING RIGGERS.

PLATE LXV.

Fig 5.

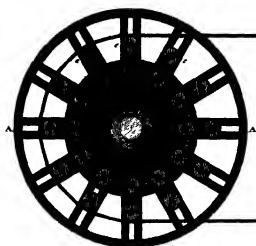
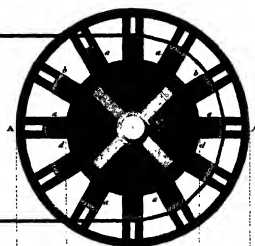


Fig 6.



M. A. Flint.

Fig 10.



Fig 7.



Fig 11 M. Percy's

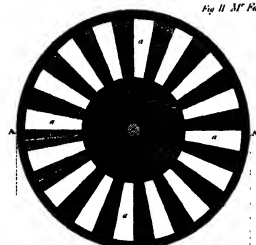


Fig 8.

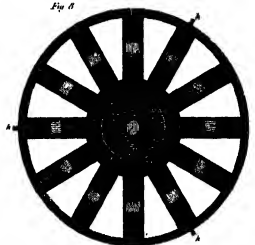


Fig 12.

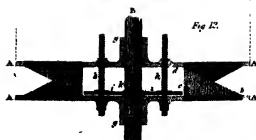
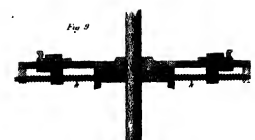


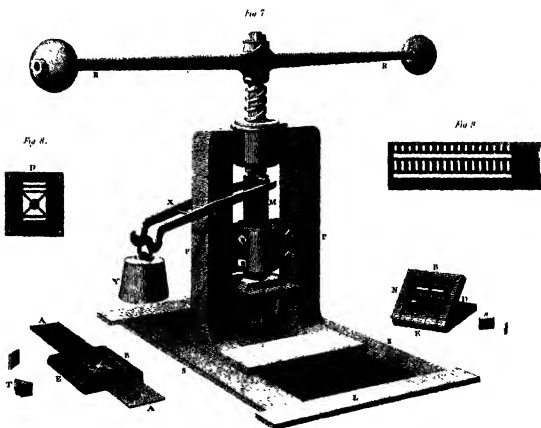
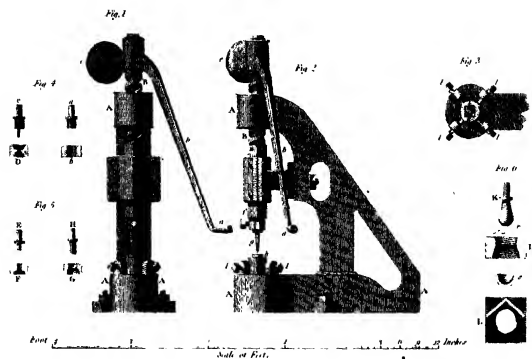
Fig 9.





**FLY-PRESS.**

PLATE XXII.



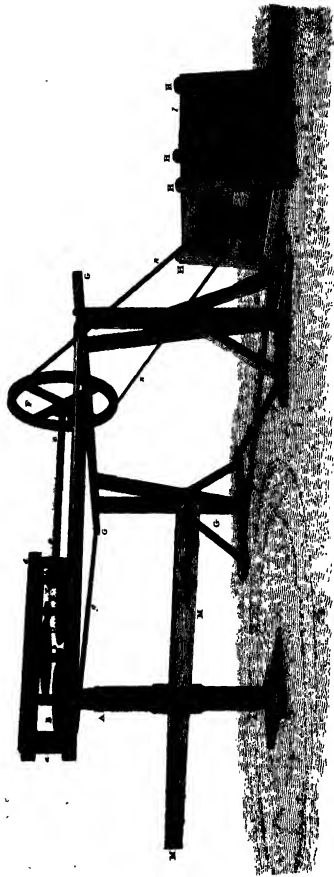


# MECHANICS.

PLATE XIV.

## M<sup>r</sup> R. SALMON'S, PORTABLE THRASHING MILL.

*Perspective View Fig. 1.*



*Section Fig. 2.*



*End View Fig. 3.*

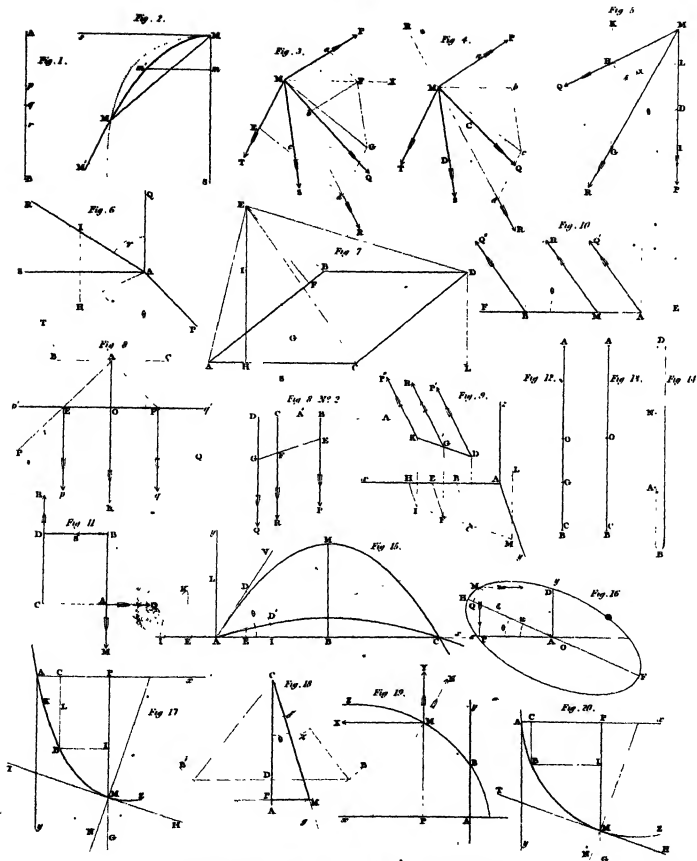


*Elevation Fig. 4.*





PLATE XVIII





# MECHANICS. FRICTION AND FULLING MILL.

PLATE, LXX

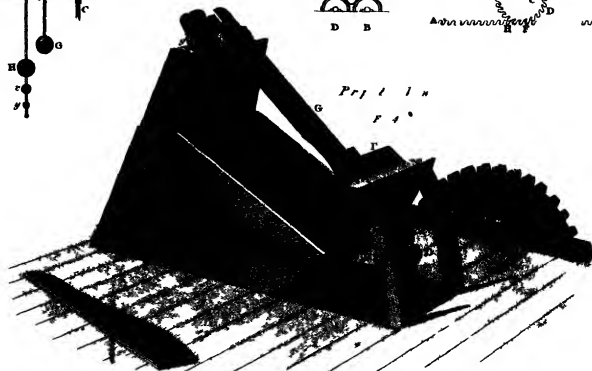
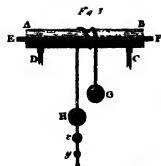


Fig. 1. A vertical rod passing through a horizontal beam, with a weight G hanging from it. A pulley system is shown with a rope passing over a pulley at H and another at I, with weights J and K hanging from the ends.

Fig. 2.

Fig. 3.





# MECHANICS

PLATE LXX & LXXVI

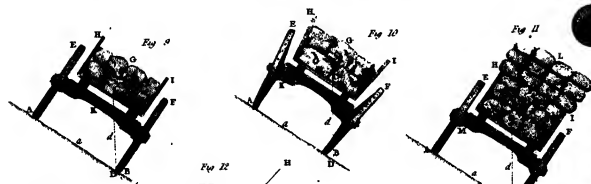
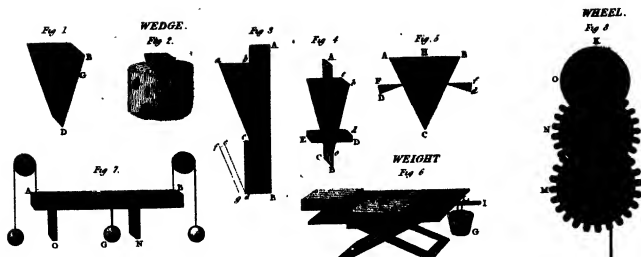


PLATE LXXVI.

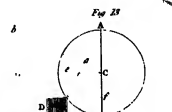
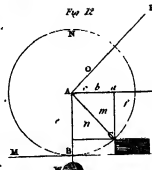
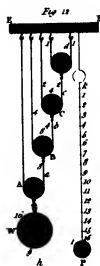
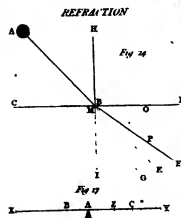
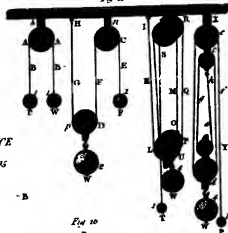


PLATE LXXVI.



SECT. OF LEAST RESISTANCE

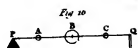
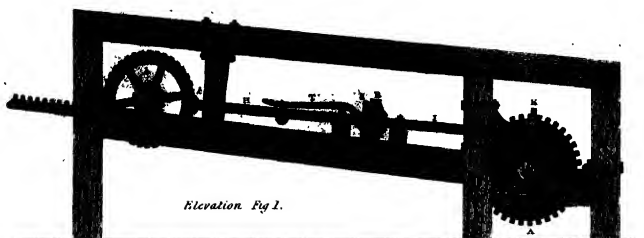


PLATE LXXVI.

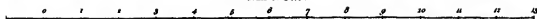
Fig. 19







Scale of Feet.



Plan. Fig. 2.

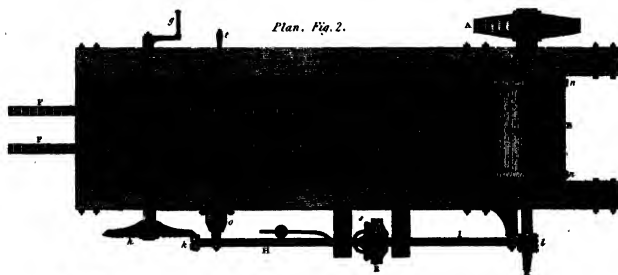


Fig. 4.

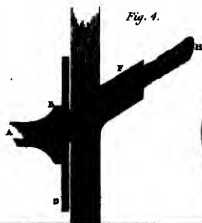
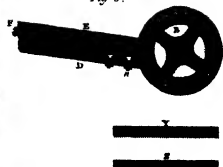


Fig. 5.



Fig. 3.





# MECHANICS MECHANICAL POWERS &c.

PLATE LXXII.

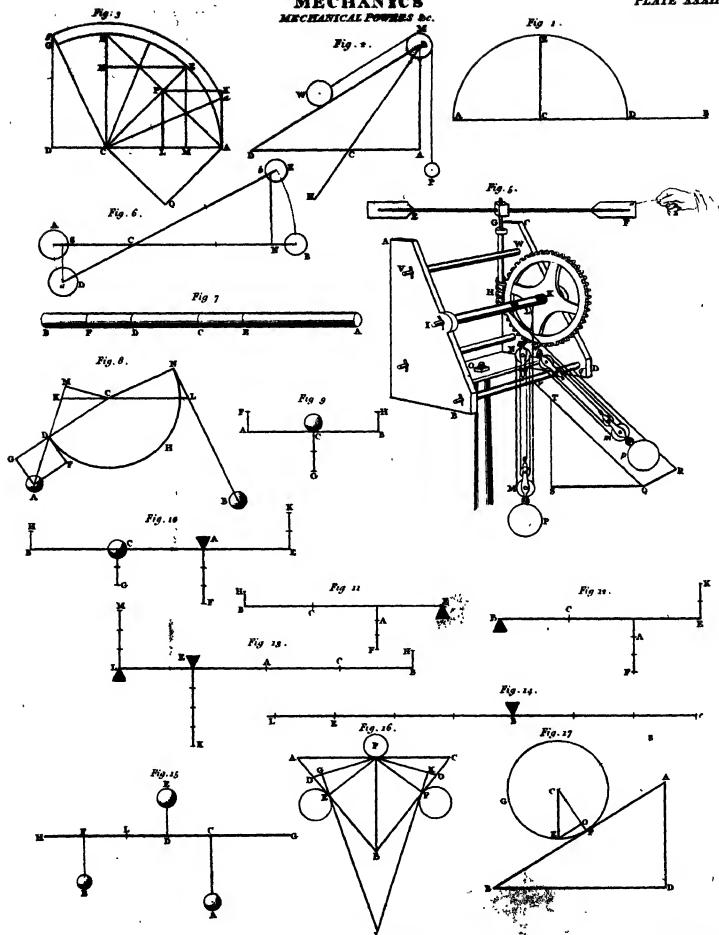




Fig. 1.

View of a  
Common Breast Mill.

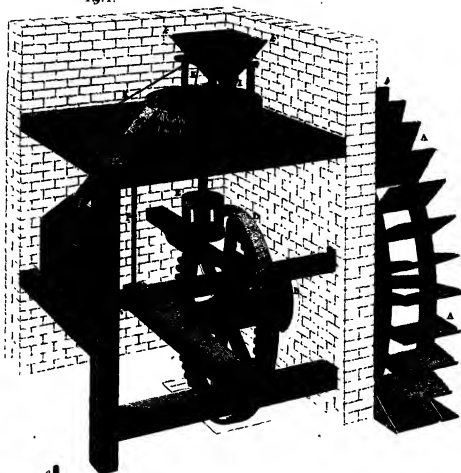
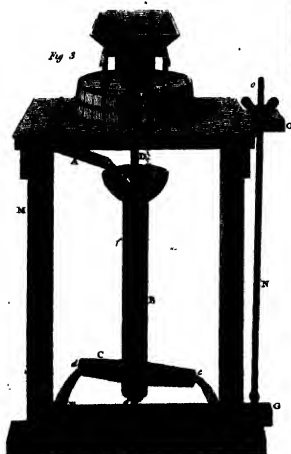


Fig. 2.



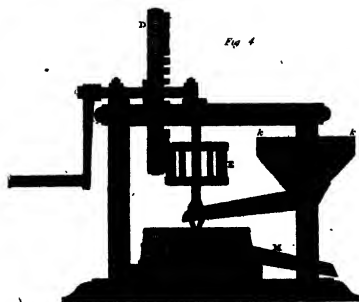
D<sup>r</sup> Barker's Mill

Fig. 3



Portable or Hand Mill

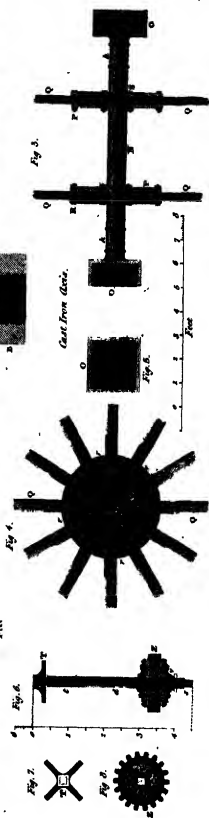
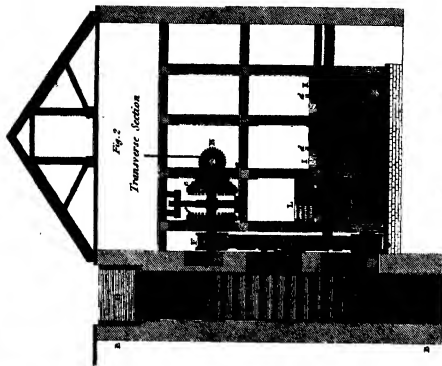
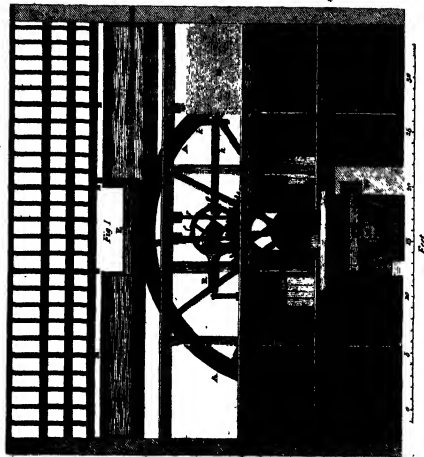
Fig. 4





**MECHANICS,**  
***FLOUR MILL.***

Designed by J. SMEATON, F.R.S. 1781.



...! *Parry* *deh*

Published at the first direction, edited by Longman, Hurst, Ross, Chamber & Brown, Paternoster Row.

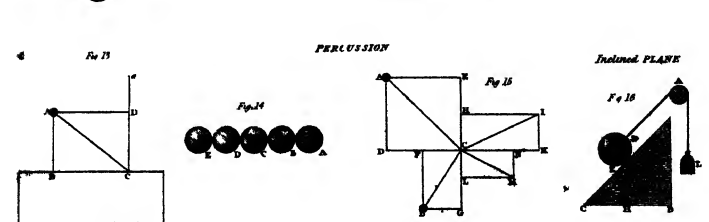
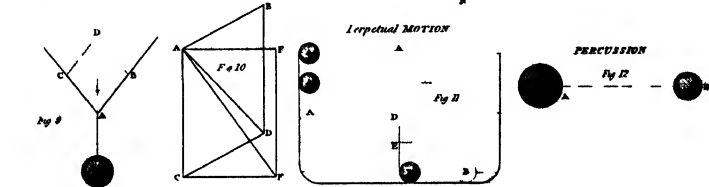
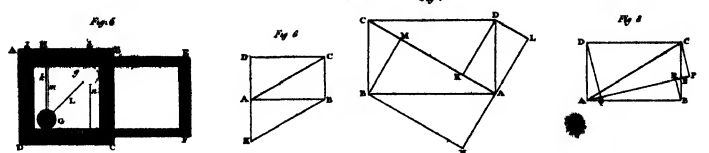
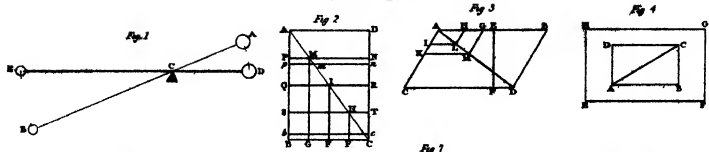
*from Kenya*



# MECHANICS.

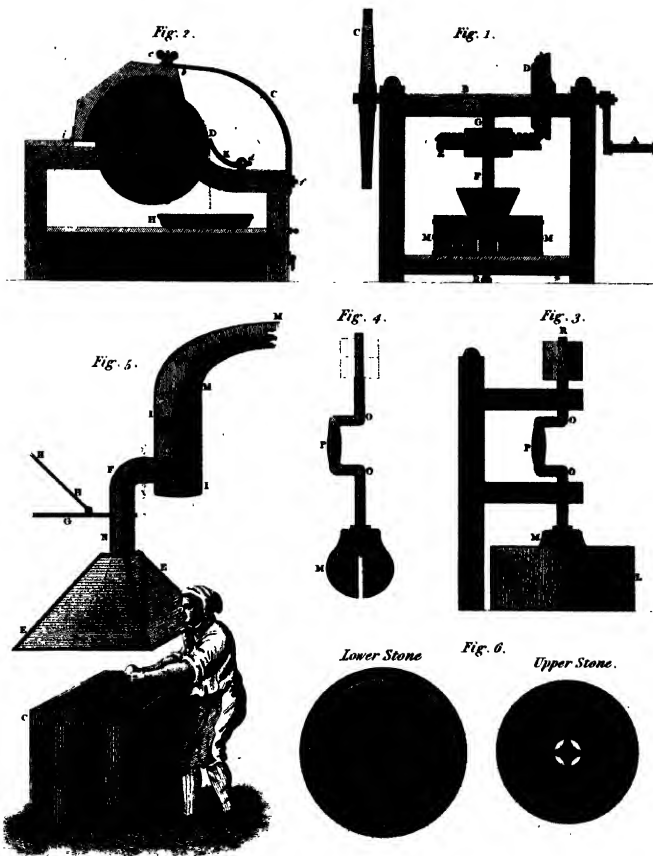
PLATE XLIV

MOTION &c.





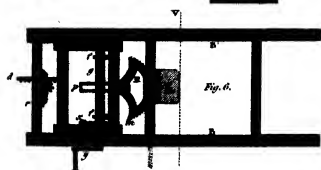
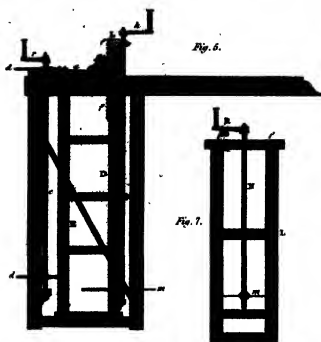
COLOUR MILL.



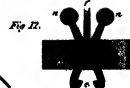
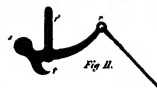
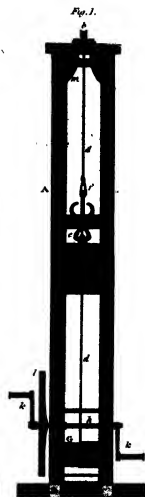
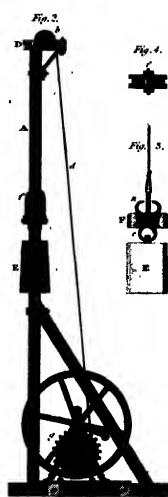
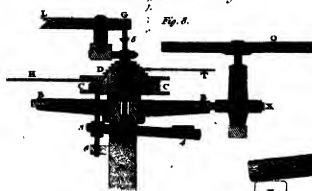


MECHANICS.  
PILE DRIVING MACHINE.

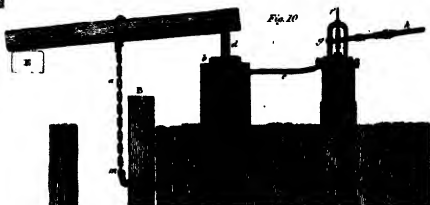
PLATE XXXV.



Section of Palouche Pile Engine

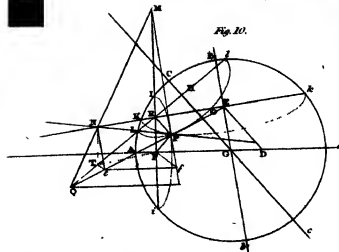
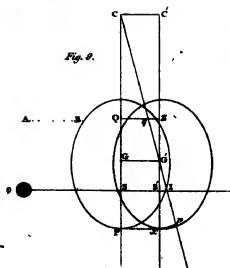
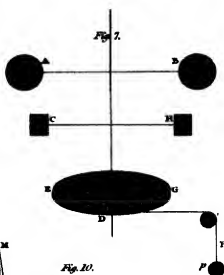
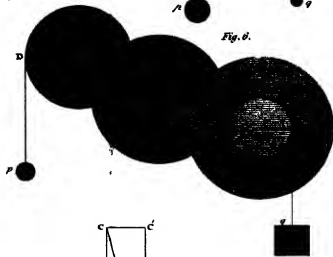
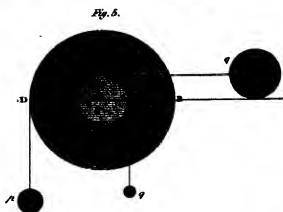
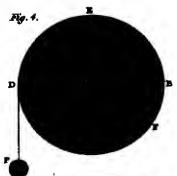
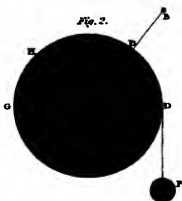
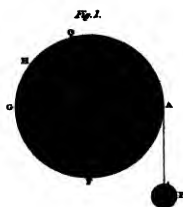


M. Bramah's Machine for Drawing Piles out of the Ground.

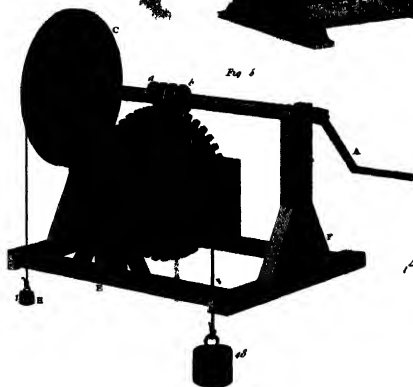
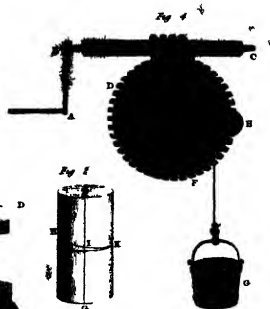
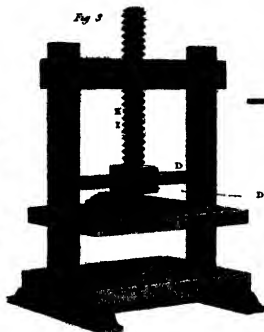




**Fig. 3. PLATE XXVII.**







SPRING Fig. 4

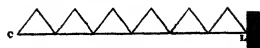


Fig. 7

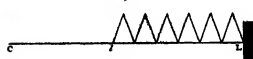


Fig. 8

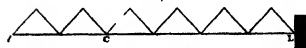
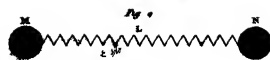
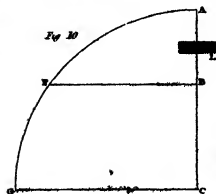


Fig. 10





# MECHANICS.

PLATE XLIII.

## STRENGTH OF MATERIALS.



Fig. 1

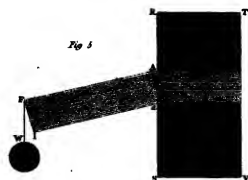


Fig. 3

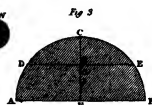


Fig. 2

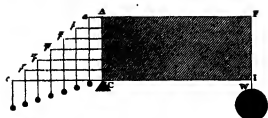


Fig. 4

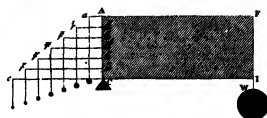


Fig. 5



Fig. 6

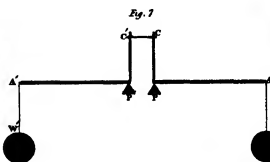


Fig. 7

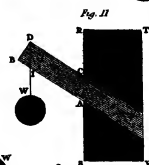


Fig. 8



Fig. 9

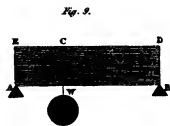


Fig. 10

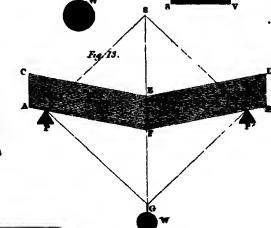


Fig. 11

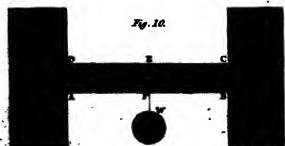


Fig. 12



Fig. 13



# MECHANICS

*Machines for casting and Drawing Lead Pipes*

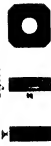
Fig. 3.



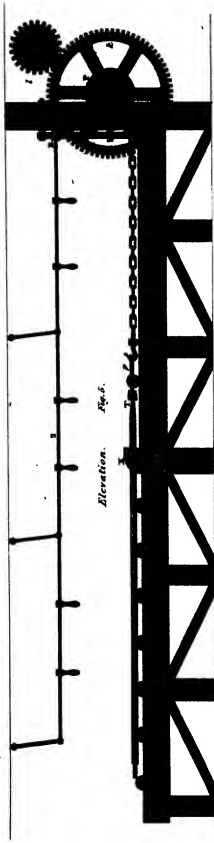
Fig. 2.



Fig. 6.



Plan, Fig. 4



Elevation, Fig. 5.

Scale of Feet.

0 1 2 3 4 5 6

10

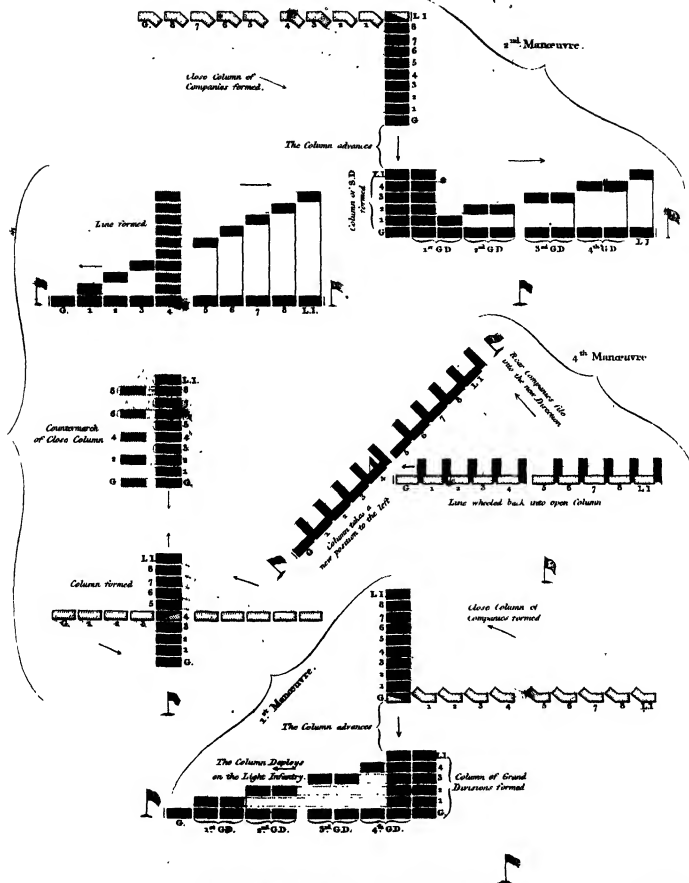
*Published at the Old Street Works by Longman, Rivers, Green and Brown, Manchester and London.*

*J. Henry Bell*



# MILITARY MANŒUVRES.

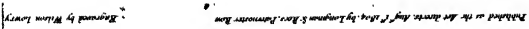
PLATE I



Published as the Act direct, Aug<sup>21</sup> 1864, by Longman & River Paternoster Row.

Engraved by Wilson Lowry.







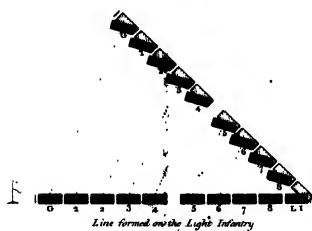
# MILITARY MANŒUVRES.

PLATE III

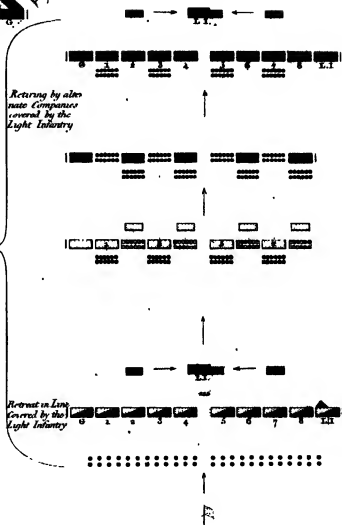
13<sup>th</sup> Manœuvre.



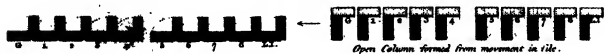
10<sup>th</sup> Manœuvre



12<sup>th</sup> Manœuvre.

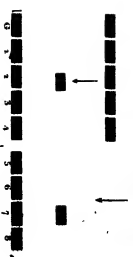
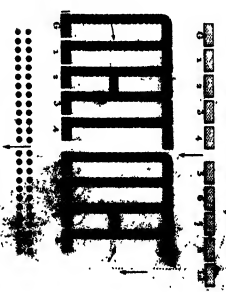
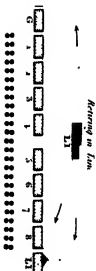
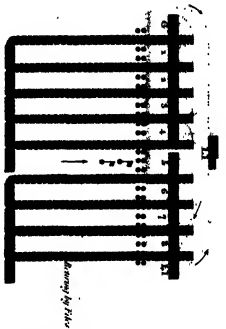


11<sup>th</sup> Manœuvre.





# MILITARY MANOEUVRES.





# MILITARY MANOEUVRES.

PLATE I.

18. Manoeuvre.



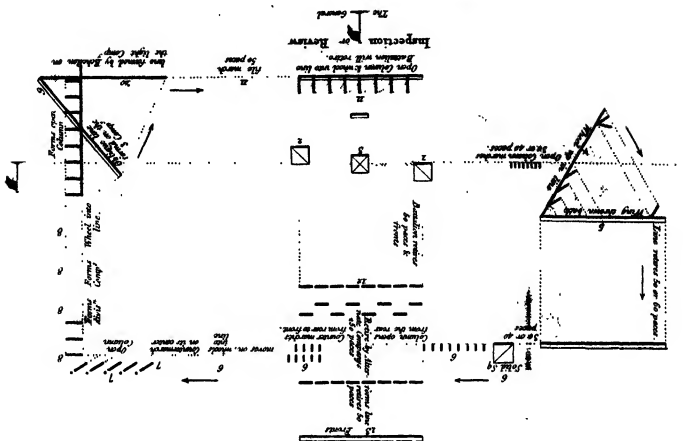
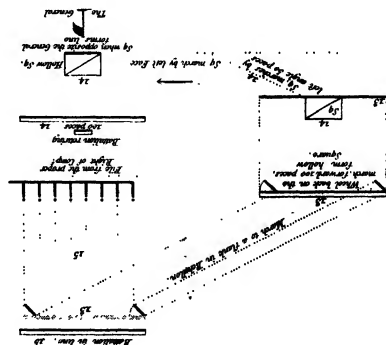
19. Manoeuvre.



moving by Flank









# MILL-WORK.

PLATE I

Fig. 1.

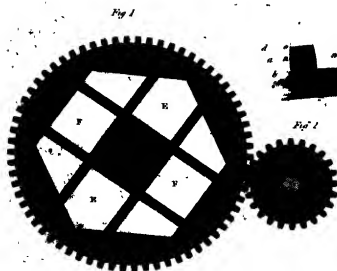


Fig. 3



Fig. 4

Bevilled Wheels

Fig. 5

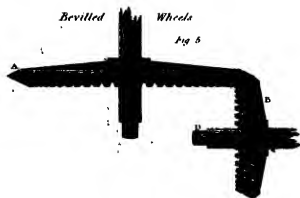


Fig. 6

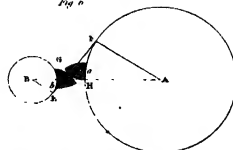


Fig. 8

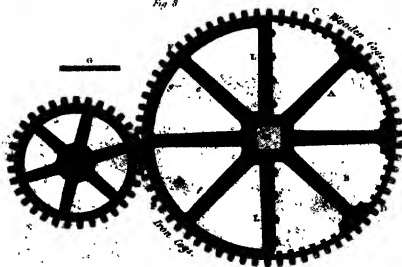
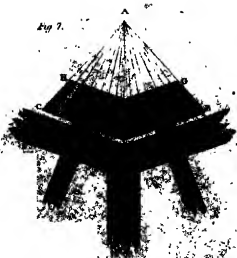
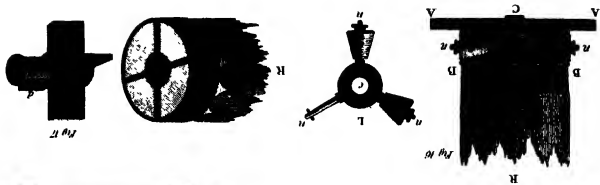
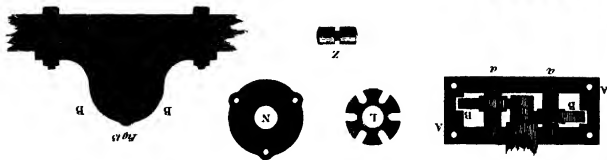
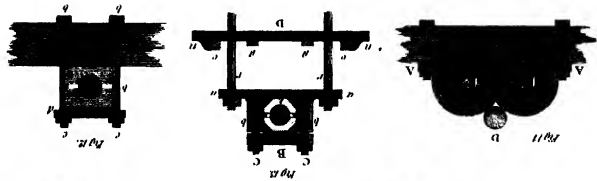
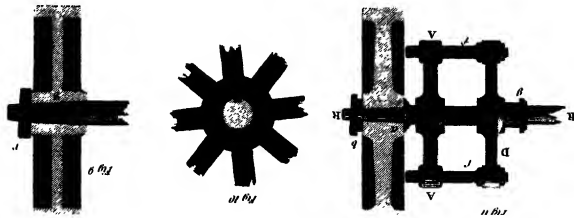


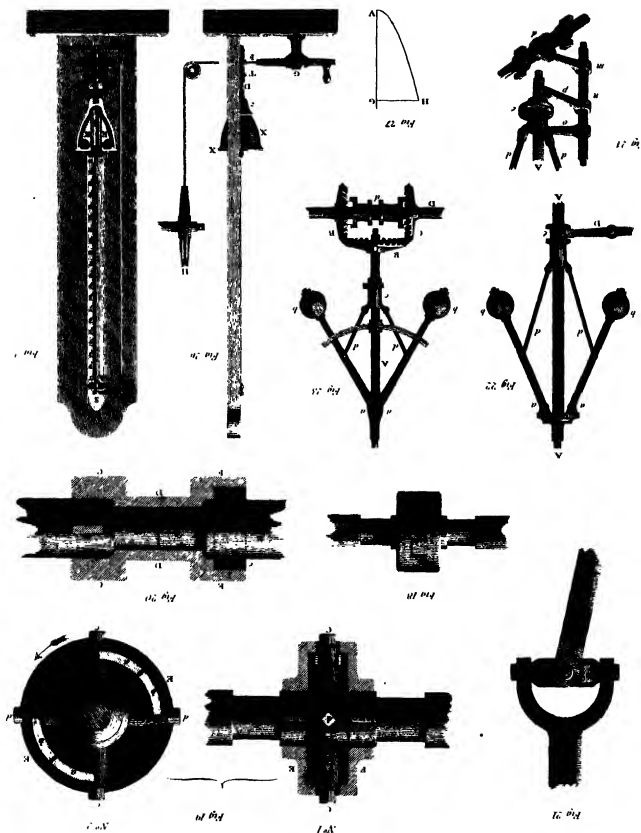
Fig. 7.











**MILL WORK.**

### III. ANALYSIS



# MINERALOGY. MINING.

PLATE I.

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

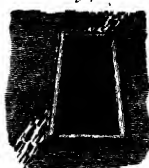


Fig. 5.



Fig. 6.

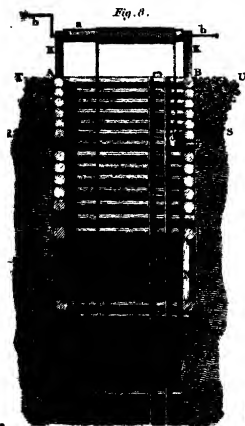


Fig. 7.

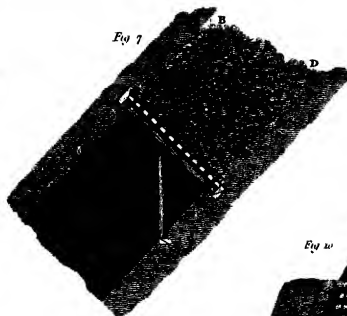


Fig. 8.



Fig. 9.



Fig. 10.

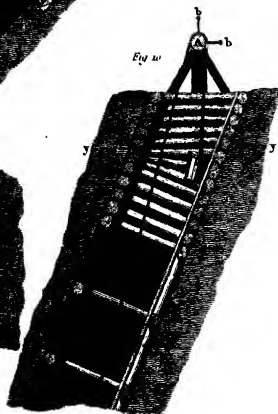
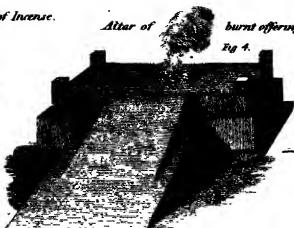




Fig. 3. *Altar of Incense.*



Altar of burnt offering  
Fig. 4.



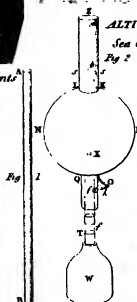
ARK of the Covenant

Fig. 5.



*Chinese Musical Instruments*  
CHING.

Fig. 6.



ALTITUDE of the Sea.  
Sea Gauge  
Fig. 7.

1	0	1	2	3	4
5	6	7	8	9	0
1	0	1	2	3	4
5	6	7	8	9	0
1	0	1	2	3	4
5	6	7	8	9	0
1	0	1	2	3	4
5	6	7	8	9	0
1	0	1	2	3	4
5	6	7	8	9	0

NEPER'S Bones  
Fig. 8.

6	7	8	9
5	6	7	8
4	5	6	7
3	4	5	6
2	3	4	5
1	2	3	4
0	1	2	3
9	0	1	2
8	9	0	1
7	8	9	0

1	6	9	7	8
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8
5	6	7	8	9
6	7	8	9	0
7	8	9	0	1
8	9	0	1	2
9	0	1	2	3
0	1	2	3	4

ANCIENT ARITHMETICAL CHARACTERS

Fig. 9.

<i>Notes of Boethius</i>	1	2	3	4	5	6	7	8	9	10
<i>Characters of Placidius</i>	1	2	3	4	5	6	7	8	9	10
<i>Characters of Al Saphadi</i>	1	2	3	4	5	6	7	8	9	10
<i>Characters of Sacro Bosco</i>	1	2	3	4	5	6	7	8	9	10
<i>Indian Characters</i>	1	2	3	4	5	6	7	8	9	10
<i>Characters of Roger Bacon</i>	1	2	3	4	5	6	7	8	9	10
<i>Modern Figures</i>	1	2	3	4	5	6	7	8	9	10
<i>A Number expressed by Al Saphadi</i>	1	2	3	4	5	6	7	8	9	10
<i>The same in the Modern Notation</i>	1	2	3	4	5	6	7	8	9	10

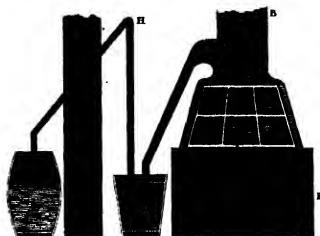
Fig. 10.



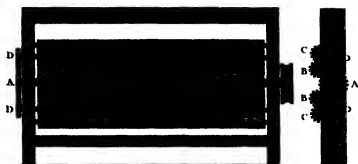
KING.



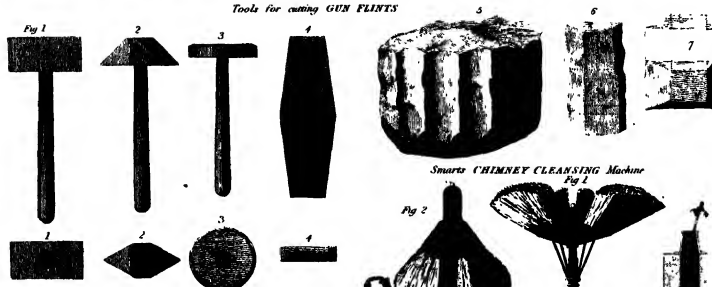
BUTTON Making



GLAZING Cloth



Tools for cutting GUN FLINTS



Smarts CHIMNEY CLEANSING Machine

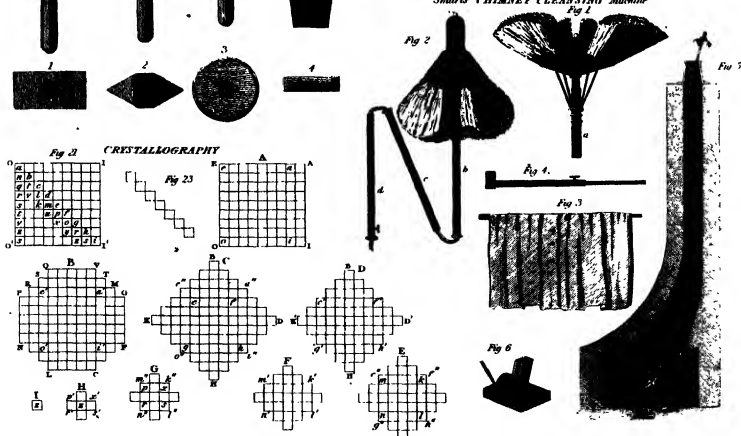
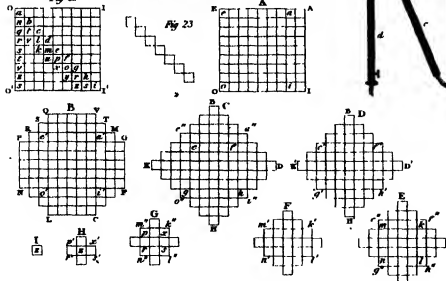


Fig 23 CRYSTALLOGRAPHY





MISCELLANY.  
PLATE COINAGE.

PLATE III.

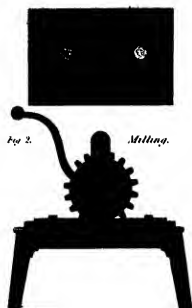


Fig 2. Milling.

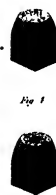


Fig 1

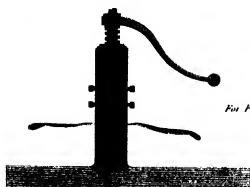


Fig 3

MISCELLANY.  
COPYING.

PLATE III.

Fig 1 Coinage.



For Fig 4 see the next Plate

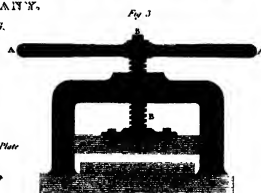


Fig 3

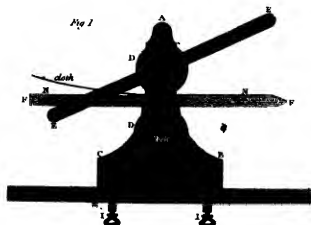


Fig 1

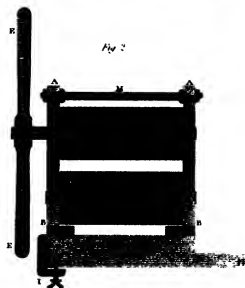


Fig 2



*Markins's patent Polygraph.*

PLATE III





MISCELLANY.  
DESIGNS FOR WEAVING.

PLATE IV

Fig 7  
Similar Spots

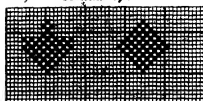


Fig 8  
Dissimilar Spots

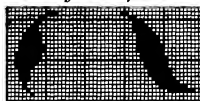


Fig 9.  
Dornock

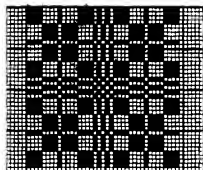


Fig 10  
Darnity

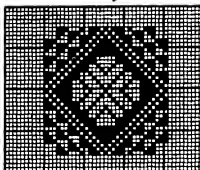
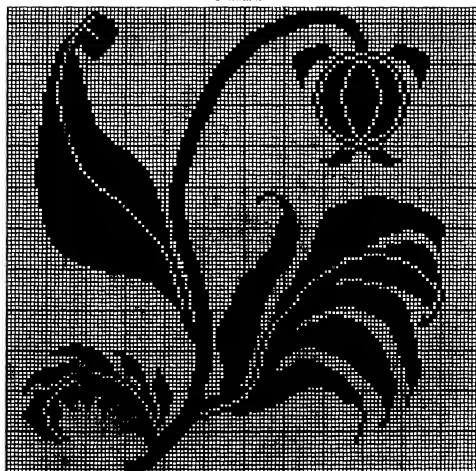


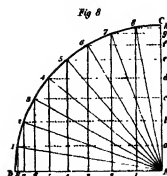
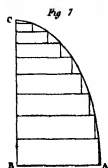
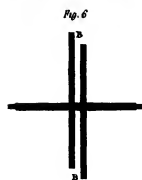
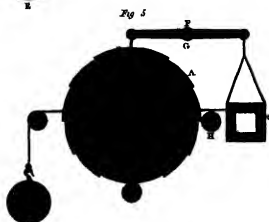
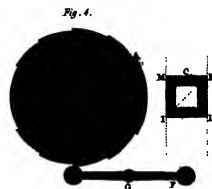
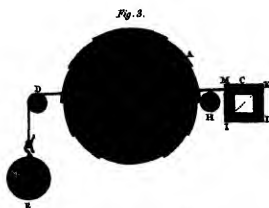
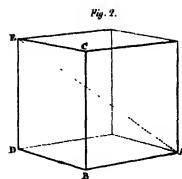
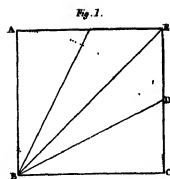
Fig 11  
Darnask





**MISCELLANY.**  
**DIAGONAL MOTION.**

PLATE V.





MISCELLANY.  
 DIAGONAL MOTION.  
 Dividing and Cutting Engine.

PLATE VI.

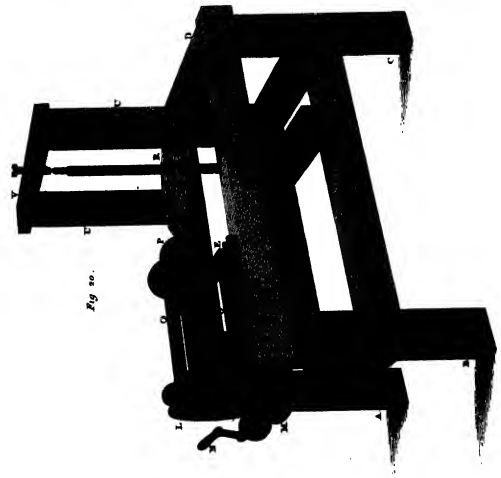


Fig 10.

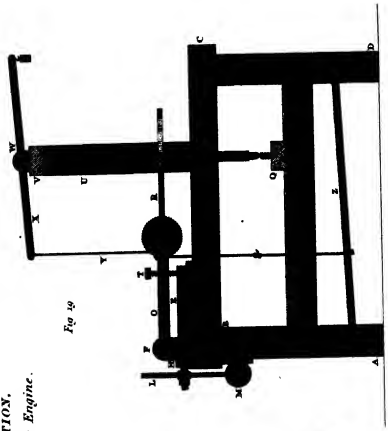


Fig 19.

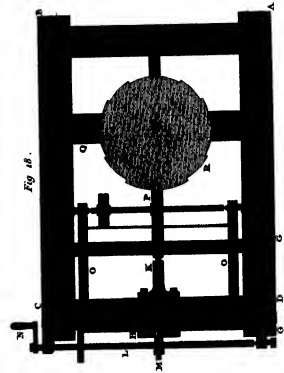


Fig 18.

Donner del.

Published at the Art Service 1878 by Longman, Brown, Green & Co. in "Antiquarian Revue."

Engraved by W. Leary.



MISCELLANY.

DIAGONAL MOTION.

PLATE VII.

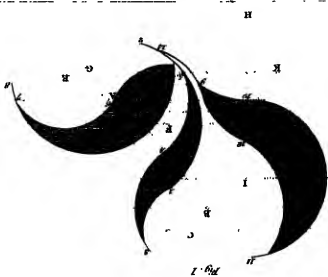


Fig. 1.

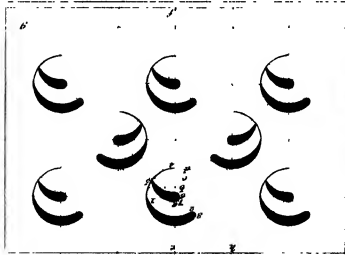


Fig. 2.

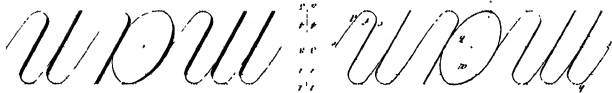


Fig. 3.

Fig. 4.

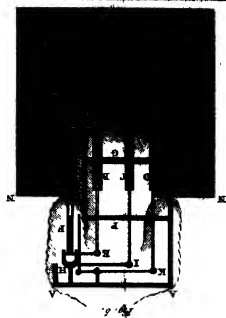


Fig. 5.

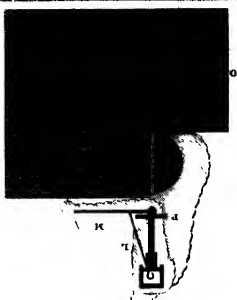


Fig. 6.

Invented and Drawn by John Bennett.

Published as the Art directs, sold by Longman, Neave & Co., Stationers, &c.

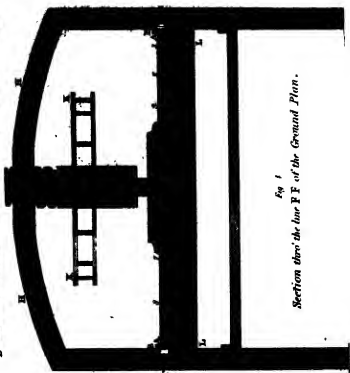
Engraved by Wilson Lowry.



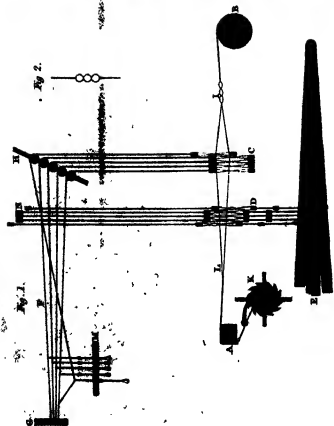
**Fig. 3.**  
**PLAN**  
**DISCHARGING PRESS.**



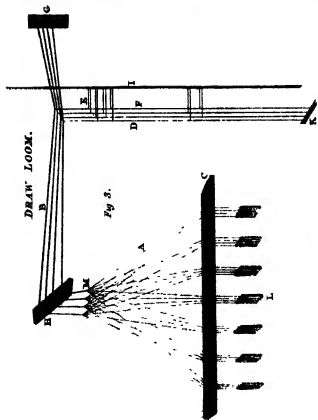
7



**DRAPER LOOM.**



**DRAW' LOOM.**





MISCELLANIES.  
DRAMATIC MACHINERY.

PLATE II AND X.

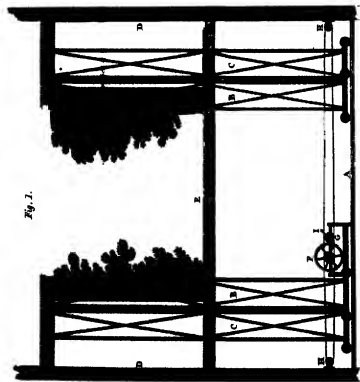


Fig. 1.

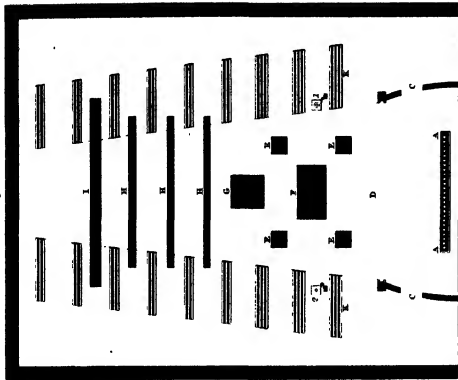


Fig. 1.

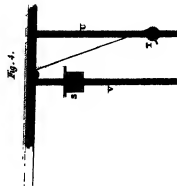


Fig. 4.

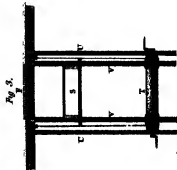


Fig. 5.

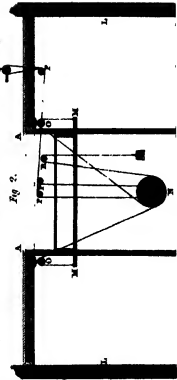


Fig. 6.

Designed and the set drawn, along by Longman, Hurst, Roe & Co., Dramatic Room

Engineer by William Loring



# MISCELLANEOUS.

## DRAMATIC MACHINERY

PLATE X.

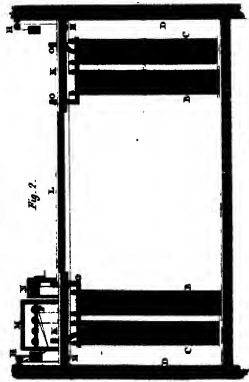


Fig. 2.

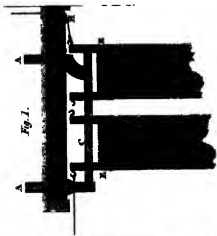


PLATE XI.

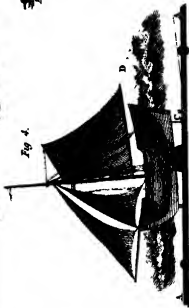
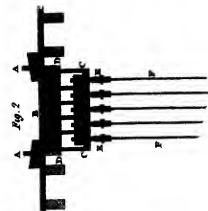


Fig. 4.



Fig. 3.

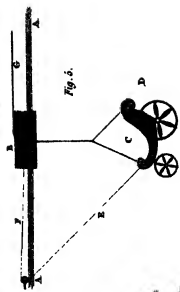


Fig. 5.

Fig. 6.

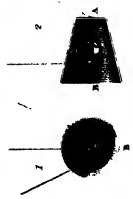
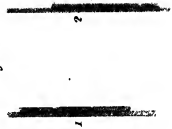


Fig. 7.



Fig. 8.

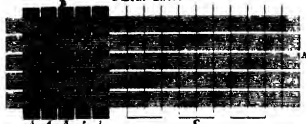




**MISCELLANY.**  
**DRAUGHT AND CORDING OF LOOMS.**

**PLATE XII.**

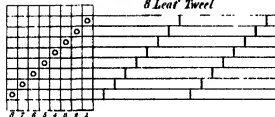
**Fig. 1.**  
**5 Leaf Tweel**



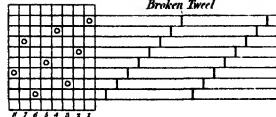
**Fig. 2.**  
**Broken Tweel**



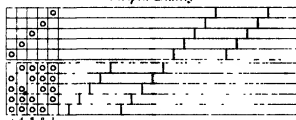
**Fig. 3.**  
**8 Leaf Tweel**



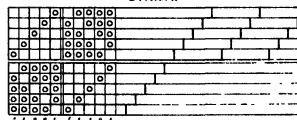
**Fig. 4.**  
**Broken Tweel**



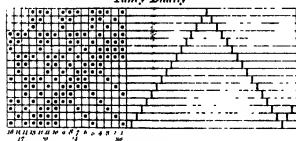
**Fig. 5.**  
**Striped Duntty**



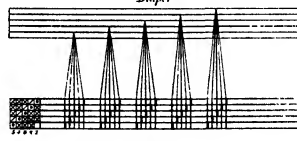
**Fig. 6.**  
**Dornock**



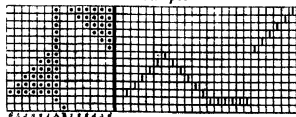
**Fig. 7.**  
**Fancy Duntty**



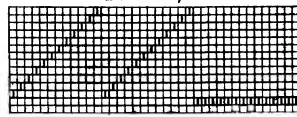
**Fig. 8.**  
**Draper**



**Fig. 9.**  
**Similar Spot**



**Fig. 10.**  
**Dissimilar Spot**

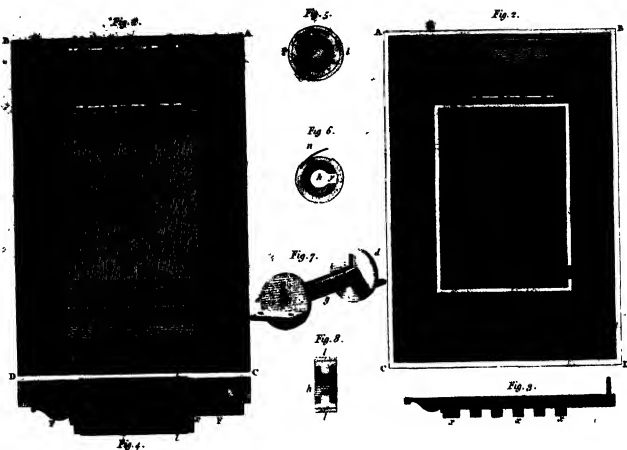




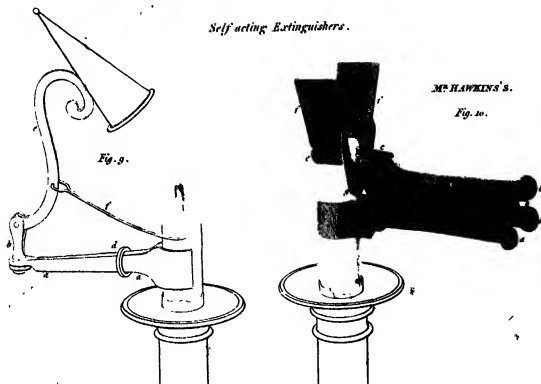
# MISCELLANIES.

PLATE

*Mr. Marshall's Secret Escutcheon for a Key Hole.*



*Self acting Extinguishers.*





M. Masoré,  
Original suspension.



Fig. 15.

M. Masoré, FIRE ESCAPE  
Simplified by M. Forster.

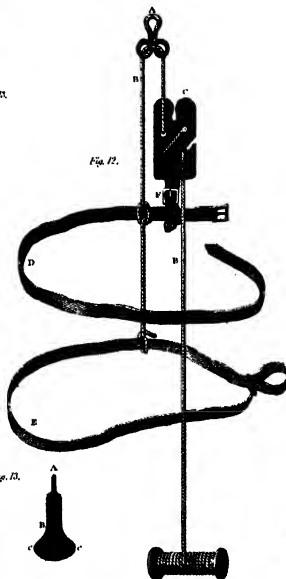


Fig. 17.



Fig. 16.



Fig. 1.

Indigo  
Fig. 1.

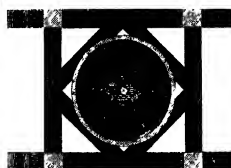


Fig. 2.

INDIGO  
Mills.

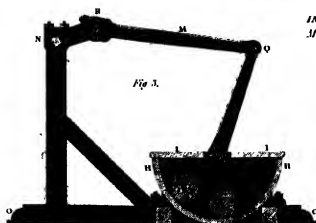
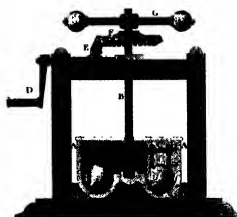


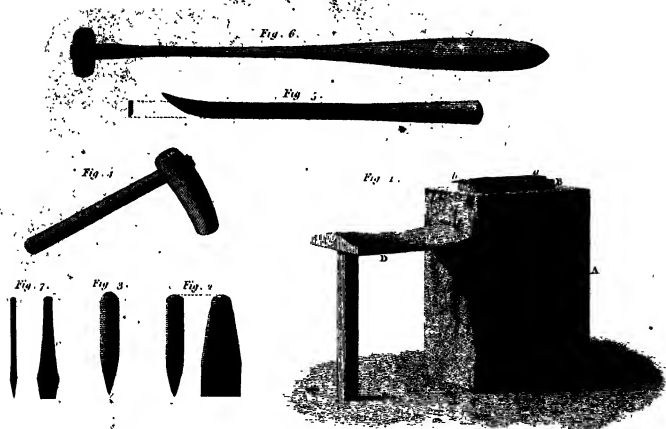
Fig. 3.



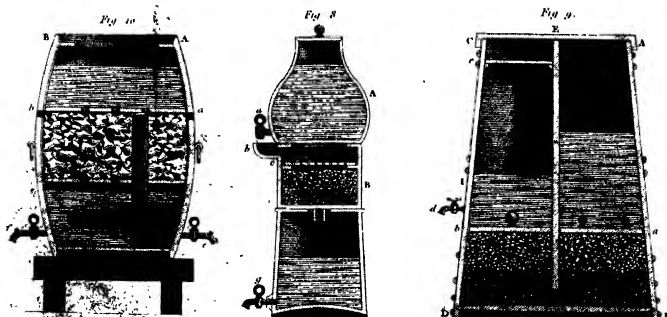


MISCELLANY.  
PILE CUTTING

PLATE XIII



FILTERS



J. H. P. & Co. delin.

Published as the direct result of Longman Hunt, Esq. & Co. Brown, Patented Nov.

Engraved by W. Lewis

1

2

3

# MISCELLANY.

FIRE PLACE by D<sup>r</sup> FRANKLIN.

PLATE A

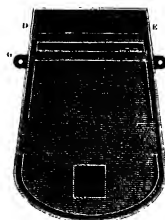
Side Plate  
N<sup>o</sup> 3



Back Plate  
N<sup>o</sup> 2



Bottom Plate  
Fig. 1, N<sup>o</sup> 1



Front Plate  
Fig. 4



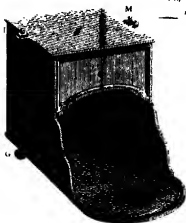
Air Flue  
Fig. 1



Ledges  
Fig. 3



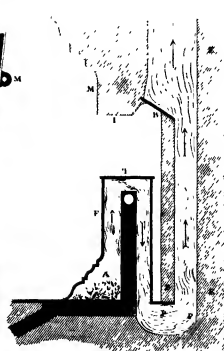
Fig. 6



Top Plate  
N<sup>o</sup> 4



Fig. 7



Register  
N<sup>o</sup> 9



Shutter  
N<sup>o</sup> 7





Fig. 1

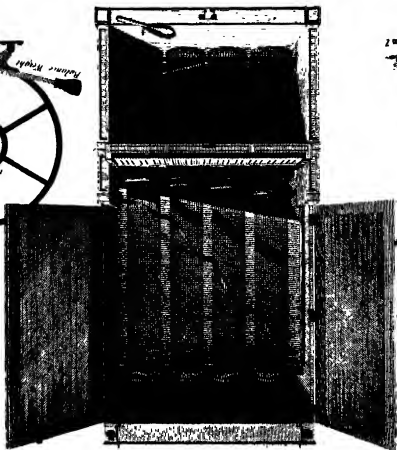


Fig. 3 or 7

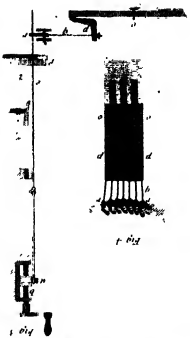


Fig. 4

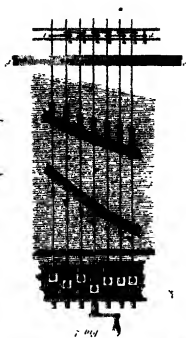


Fig. 5

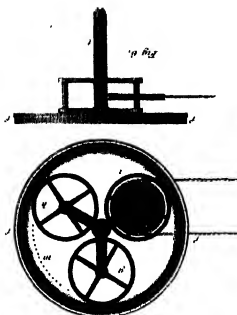


Fig. 6 or 8

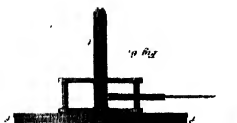


Fig. 7



MISCELLANEOUS.  
FLOOD GATES.

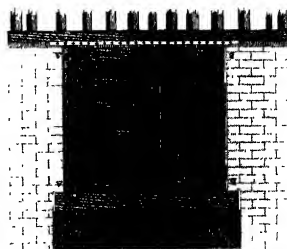
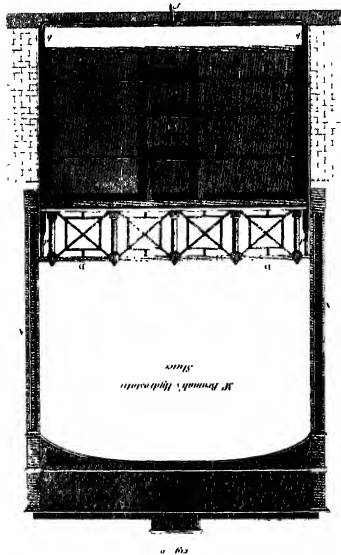
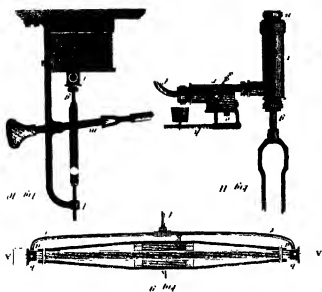
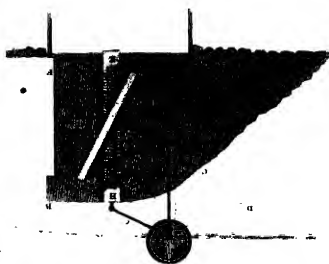


Fig. 2. Self-acting Flood Gate by Mr. Brown.



*Published by the Author, 1848, for the London and Westminster Waterworks Company, Limited.*

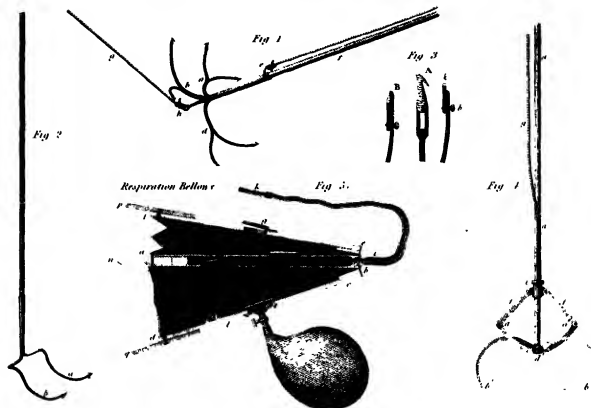
*Printed by the Author, 1848, for the London and Westminster Waterworks Company, Limited.*



# MISCELLANY.

PLATE II.

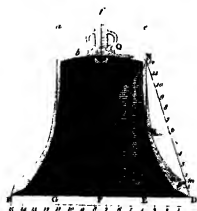
Apparatus for restoring those DROWNING to life



## FOUNDRY OF BELLS

Fig 1

FOUNDRY OF BELLS



## FOUNDRY OF LETTERS or TYPES.

Upper half of Mould  
Fig 3

Under half of Mould  
Fig 2

Flat Gauge



Irish Gauge



A Type  
when cast



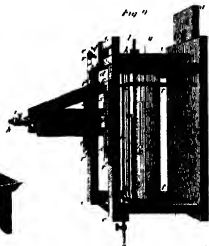
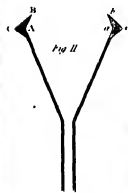
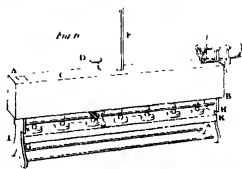
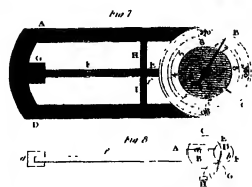
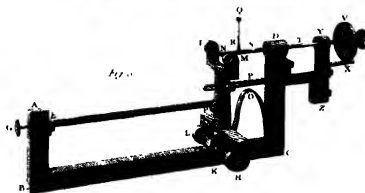
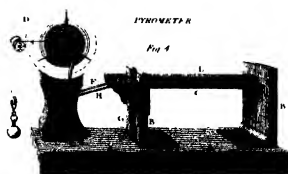
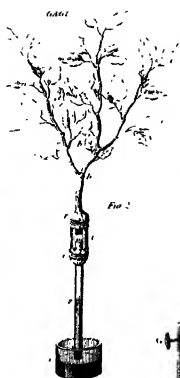
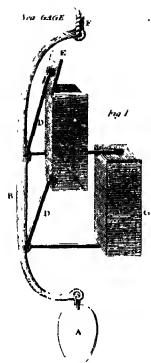
Letter



Letter





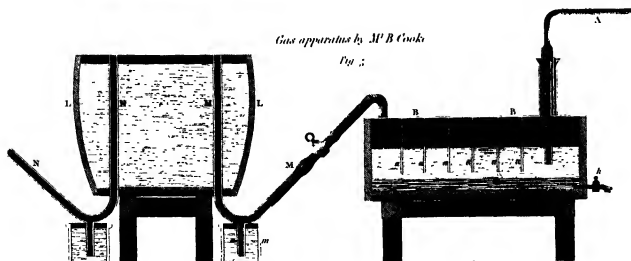
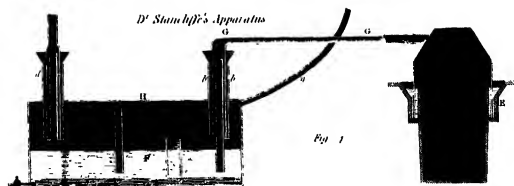
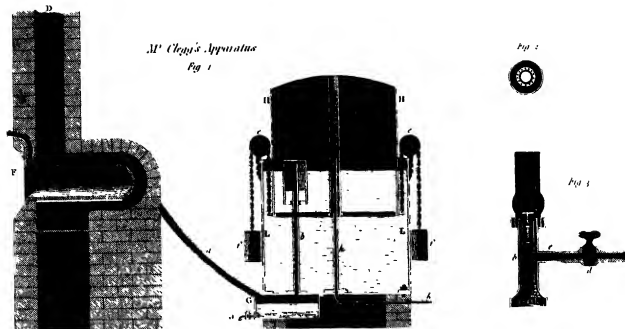




# MISCELLANY.

PLATE A111

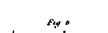
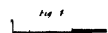
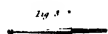
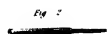
## GAS LIGHTS



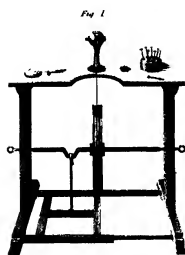


# MISCELLANY.

PLATE VIII



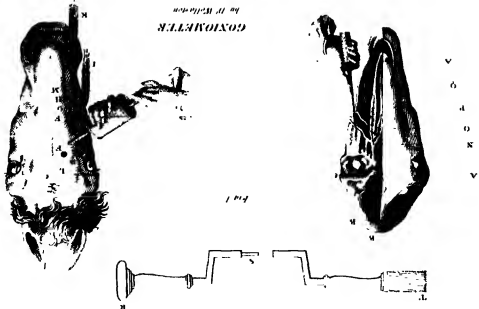
GEM Engraving





# MISCELLANY.

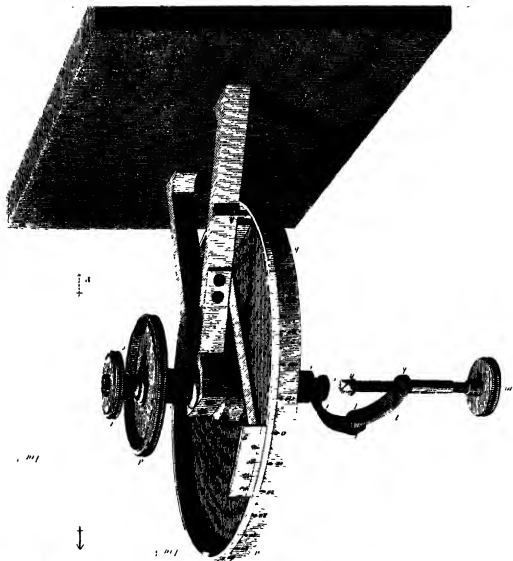
PLATE III.



GONIMETER  
by Dr. WILSON

The position of a surface of  
or an animal's eye  
by reflection  
of the same as the  
in the same place it must  
have moved about an  
angle of 90°. The  
supplement is 90°.

Fig. 2.



Published as the property of the Longman, Brown, Green & Co. Limited, London.



Fig. 1.

BEE HIVE.

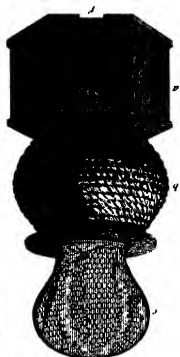


Fig. 2.



Fig. 3.



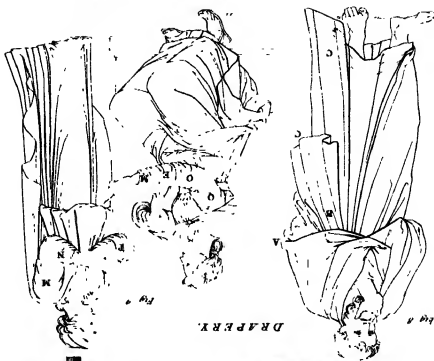
Fig. 4.



Fig. 5.



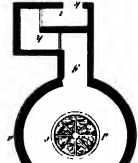
DRAPERY.



MORTAR MILL.

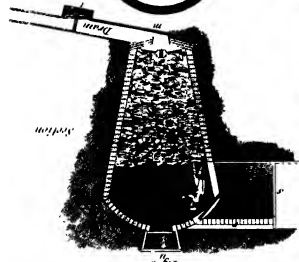


Plan.

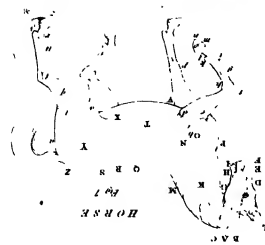


THE HOUSE.

PLATE XX.



Section.



HORSE.



# MISCELLANY.

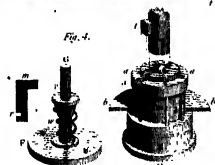
PLATE XVI.

*M. Bramah's Patent Lock.*

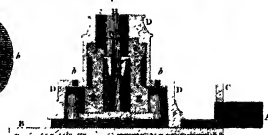
*Fig. 1.*



*Fig. 2.*



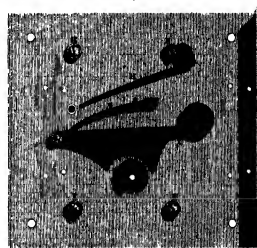
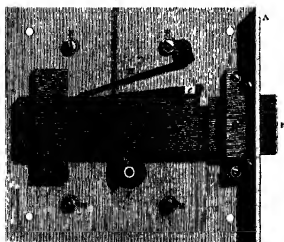
*Fig. 3.*



*Fig. 4.*

*M. Rowntree's Patent Lock.*

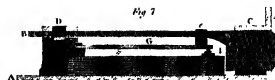
*Fig. 5.*



*Fig. 6.*

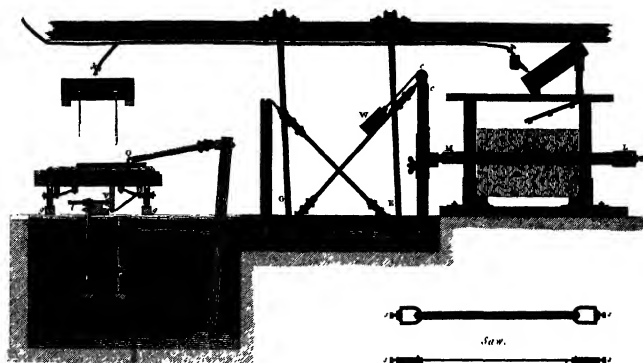


*Fig. 7.*

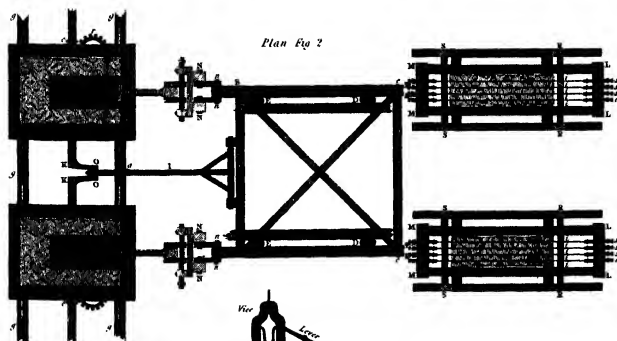




*Elevation, Marble Mill, Fig 1*

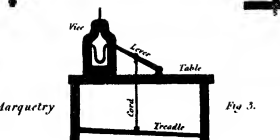


*Plan Fig 2*



*Marquetry*

*Fig 3.*





## PLATE XVIII &amp; XIX

*Fig. 1 PLATE XXIV\**



Fig. 3

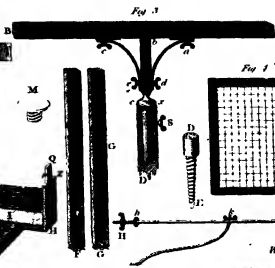


Fig. 1

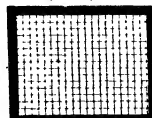
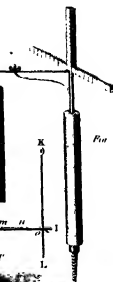
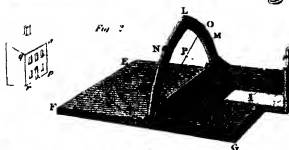


Fig. 5



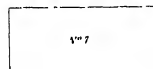
Eq. 5



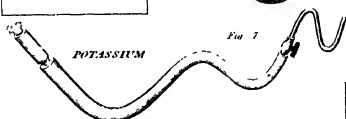
*Fig. 6*  
*POT-ASH*



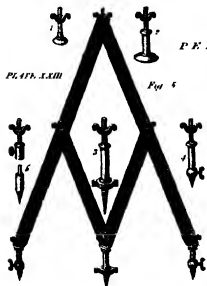
3<sup>o</sup> 2



**POTASSIUM**



## P E N T A G R A P H



**PL 4FA-XIII**

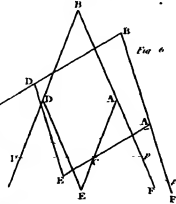


Fig. 2

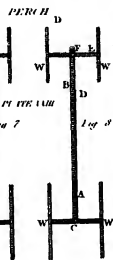
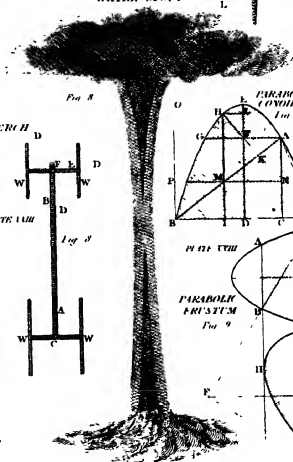


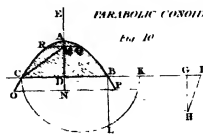
Fig. 8



PARABOLIC  
C O V I D  
Fig. 11

PL 121-172

PARABOLIC  
FRISSTUM  
Vol. 9



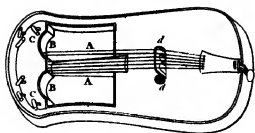
### PARABOLIC CONSOLID



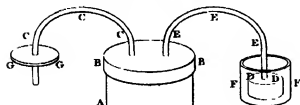
### MISCELLANY.

PLATE XIV

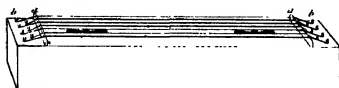
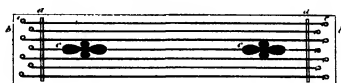
**Fig. 2. CROWTH**



### Fig 3 FILTRATION



*Fig 1. EVLUS'S Harp*



**Fig 4 Marine TRIMPT**

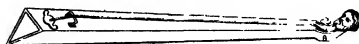
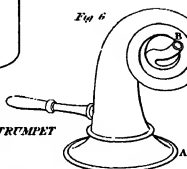
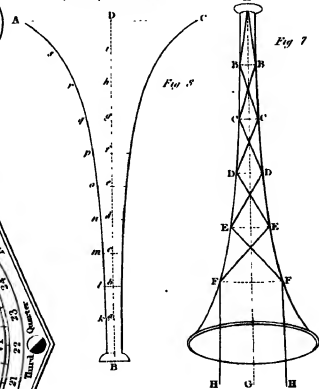


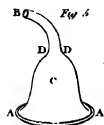
Fig. 6



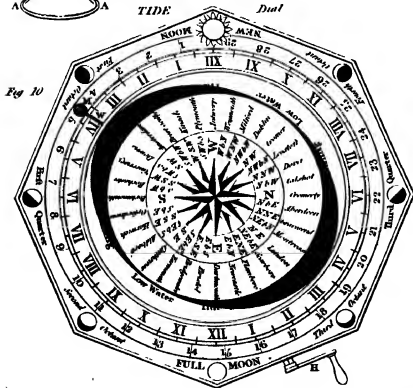
*Speaking* **TRUMPET.**



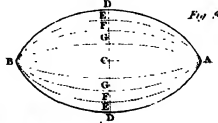
### Howing TRUMPET



**TIDE**












**VOICE**





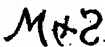


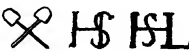


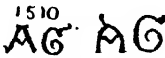

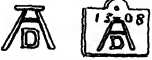











MONOGRAMS, &c.  
used by the FRENCH Engravers

WR <i>Woudel Reich</i>	p  <i>Jean Duvert or Davet</i> 2 Marks	noe 8 <i>Noel Garnier</i>	ML <i>Michael Laisne</i>	
LE <i>Leonard Gaultier</i>	  † <i>Pierre Wozart or Besse du</i> 2 Cyphers	The Wood Cuts of P. Wozart	B DB <i>Solomon Barnard</i> 2 Marks	
R <i>Roué Beauva</i>	P  <i>Jacques Perron or Perronne</i> 2 Marks	F F <i>François Perrot</i> 2 Cyphers	 <i>Pierre Preboute</i>	
DF   <i>Jerome David</i> 3 Cyphers		D <i>Pierre Duvert</i>	 SP SD <i>Stephan du Perac</i> 3 Marks	
AG <i>Antoine Garner</i>	E <i>François Cheveau</i>	T <i>Jean Courvay</i>	B <i>Demetrius Barriere</i>	V <i>Sebastien Voullement</i>
	P <i>Pierre Lombart</i>	 <i>Jacques Stella</i>	DL <i>Nicolas de Larnigou</i>	



MONOGRAMS &c  
used by the GERMAN Engineers



















(Plate I)

 <i>Martin Schwen</i>	 <i>Barthelmev Schwen</i>	 <i>Schubert's Inventor, Patent of 1855</i>	 <i>Hans Schaufhausen, Sen"</i> 3 Marks
 <i>Hans Schaufhausen, Jun"</i> 5 Marks	 <i>Martin Zupf</i> 2 Marks	 <i>Albert G. Gerdien</i> 2 Marks	
 <i>Albert Altkirch</i> 2 Marks	 <i>Albert Durr</i> 2 Marks	 <i>Hans H. H. H.</i> 2 doubtful marks	
 <i>Sigismund Holthaus</i>	 <i>Lucas Krauss</i> 5 Marks		 <i>Lucas Krauss</i>
 <i>Hans Schald Behne</i> his 1 <sup>st</sup> Mark his 2 <sup>nd</sup> Mark	 <i>Burgheuer, Haldung &amp; Brossing</i> of doubtful Authority		 <i>Barthelmev Schwen</i> 2 doubtful Marks
 <i>Gregory Ponz</i> 2 Marks	 <i>Henry Altkirch</i>	 <i>Hans Brossamer</i>	 1545. <i>Isaac H. H. H.</i>



MONOGRAMS, &c.  
used by the GERMAN Engravers.

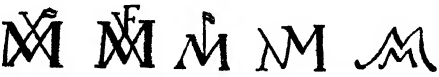











Plate II

 <i>Jacob Bruck</i>	 <i>Henry Lautensack</i> 2 Marks	 ISL <i>Hans Schuel Lautensack</i> 1 Mark	 <i>Theodor de Byre</i>
 <i>Christopher Stimmer</i>	 <i>David or Daniel Hoyer</i> 2 Marks		 <i>Jeanne Hoyer</i>
 <i>Thomas Stimmer</i> 2 Cyphers			
 <i>Melchior Lorch</i> 2 Cyphers	 <i>Vinyl Nels</i> 3 Cyphers	 <i>Christopher Maurer</i> 2 Cyphers	
 <i>Christopher Jannitzer</i>	 <i>Jost or Johannes Annan</i> 3 Marks		 <i>Matthias Garber</i>
 <i>John Frederic Greuter</i>	 <i>Demetrius Crestes</i>	 <i>Theodore Cruger</i> 2 Cyphers	 <i>Matthias Cruger</i>
 <i>Wolfgang Kilian</i>	 <i>Lucas Kilian</i>	 <i>Bartholomew Kilian</i> (doubtful)	
			



MONOGRAMS, &c.  
and by the GERMAN Engravers

Plate III

 <p><i>Matthieu Mercur</i> 5 Marks</p>		
 <p><i>Christopher Tophen</i></p>	 <p><i>Winnifred Heller</i></p>	 <p><i>The mark used by Richard Pinner</i> <i>John William Darr</i></p>
 <p><i>Gerard Lottin</i> 6 Marks</p>		
 <p><i>John Urs Krens</i></p>	 <p><i>Andreas Meyer</i> 7 Marks</p>	 <p><i>John James Thommerson</i></p>
 <p><i>David Meyer</i> 7 Marks</p>		 <p><i>Rudolph Meyer</i></p>
	 <p><i>Adrian Van Oude</i> 2 Marks</p>	 <p><i>Leet</i></p>



MONOGRAMS, &c.  
used by the Engravers of the LOW COUNTERS.

Plate I

 <i>John Celliaert</i>	 <i>Jerome Boische</i> 2 Marks		 <i>Jacob Bosens</i>
 <i>Henry Goltzins</i>	 <i>Peter Creech</i>	 <i>Walter van Aken</i>	 <i>Lucas Jacobs</i> <i>Adrian Celliaert</i>
 <i>Cornelius Molenda</i>	   <i>Cornelius Boes</i> 4 Marks		  <i>Martin Bouskerck</i>
 <i>Peter Brugghe</i>	 <i>Crispin de Pijpe</i>	 <i>Dietrich van Staren</i>	 <i>Henry van Cleef</i> <i>Wilhelm de Pijpe</i>
 <i>Dirk Volkart Oornhout</i> 3 Cyphers		 <i>Petrus</i> <i>Babylene</i>	 <i>Crispin vanden Buseck</i> 3 Cyphers
 <i>Jerome Creech</i> 2 Cyphers		 <i>Martin van Cleve</i>	 <i>Magdalen de Pijpe</i> 2 Cyphers



# MONOGRAMS, &c.

used by the Engravers of the *LOW COUNTRIES*.

































Plate II

				
<i>Simon Pijpe</i>	<i>Christopher van Sicken</i>	<i>Hannover John Bol</i>	<i>Cornelius van Sicken</i>	<i>John Suckler</i>
				
<i>Philip Galle</i> 4 Marks	<i>Cornelius Cost</i>	<i>Nicholas de Bruyne</i> 1 Mark		
				
<i>Afuerus Hendrick</i> 20 Schilling	<i>Jerome Wierix</i>	<i>Abraham de Bruyne</i> 25 Marks		
				
<i>Zachary Delende</i>	<i>Paul Moretus</i>	<i>Karl van Sicken</i>	<i>James Matham</i>	<i>James de Ghent</i> the Elder
				
<i>John or Hans Souterdam</i> 7 Schilling	<i>Bartholomew Delende</i> 3 Marks			
				
<i>Henry Hendius</i>	<i>H</i>	<i>Abraham Bloemart</i>		



MONOGRAMS &c.  
used by the Engravers of the LOW-COUNTRIES.

Plat. III

					
<i>Jost Hendius</i>	<i>Lucas Verstaen</i>	<i>William Hendius</i> 2 Guilder	<i>David Teniers</i>	<i>Gendula Blocher</i>	
					
<i>Michael Vissels</i> 2 Marks		<i>Salinus u Bolswert</i> 4 Marks		<i>Esme van de Velde</i>	
					
<i>Albert Flumen</i>		<i>Adam u Bolswert</i> 2 Marks		<i>Peter Mogen</i>	
					
<i>Christiaan-Louis Meert</i>		<i>Nicholas Breyhem</i> 5 Guilder		<i>Peter D'Elpe</i> 2 Marks	
					
<i>Nicholas Vijver</i> 2 Marks		<i>Peter Quast</i> 4 Guilder		<i>Johan George van Vliet</i> 2 Marks	
					
<i>Antonie Wubbe</i>	<i>Henr van der Borch</i>	<i>Peter van der Borch</i>			



MONOGRAMS &c.  
used by the Emperors of the LOW-COUNTREES.

Plate IV

TK

*Theodore van Ryfel*

A

*Abraham Gance*

H<sup>f</sup>

*Herman van Swaenvelt*

E.

*Jehan de Bouchepor-Episcopus*

E<sup>ruyl</sup>

*Levin Gunt*

B

*Barteldewew Bredemach*

↓

*Johan van Sonen*

H R. 2 h.

*Jannes van den Huden*  
J. Mals

XX

*Robert van Audenaerde*

A

*A. E. Barbas*

M-B

*Johan van Hagenburg*

RB

*Piet van Bland*

WB

*William Butenweg*

VB

*Johan van den Bruggen*

W<sup>e</sup>

*William de Loven*

J. L. f.

*Johan von Londerseil*

ML. M<sup>†</sup> L. M

*Herman. Muller*  
J. Marke





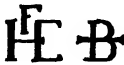
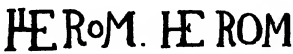










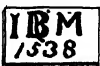
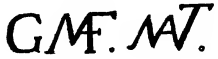


S<sup>w</sup>

*Peter Struveners*



MONOGRAMS, &c.  
used by the ITALIAN Engravers.

Plate I

			
<i>A. Int. de Brèsis</i>	<i>Andrea Montagna</i>	<i>Nicolas de Modena 2 Marks</i>	<i>Apostolo of Venice</i>
			
<i>Domitius Berochini of doubtful Authority</i>	<i>Arcyone Moretto 2 Marks</i>		<i>Leo Darses Lion Darses</i>
			
			
<i>Mare Antonio 1 Cypher and 2 Marks</i>			
			
<i>Mare of Ravenna 3 Cyphers</i>	<i>Antio. Bonasone 3 Marks</i>		<i>Domitius Barbieri 2 Marks</i>
			
<i>Nicolas Beattius of Lorraine 4 Cyphers</i>			<i>Lucas Penni 1 Mark</i>
			
<i>Jean Baptiste Ghisi</i>	<i>Giov. Ghisi of Mantua 2 Marks</i>		<i>Adam Ghisi</i> 



MONOGRAMS, &c.  
*used by the ITALIAN Engravers.*




















Plate II

 <i>Boldrini</i>	 <i>Martin Rota</i>	 <i>Antonio Fantuzzi</i> 1545 2 Spheres	 <i>J.J. Caraglio</i>		
 <i>Antonio Salamanca</i> 3 Marks		 <i>Gaspar ab Avibus</i> 3 Spheres			
 <i>J. Baptista Cavaleri's</i>	 <i>Mario Kartav</i>	 <i>Jacques Palma</i>	 <i>J. Baptiste Pigi</i>	 <i>Franceschini</i>	
 <i>Cherubino Alberti</i> 2 Marks		 <i>Andrea Andruani</i> 1608 3 Marks		 <i>Jean Louis Valesio</i> 3 Marks	
 <i>Annibal Carracci</i>		 <i>Antonio Tempesta</i> 1 Mark		 <i>Cleand Fucelli</i>	
 <i>Louis Cyvili</i> 2 Marks		 <i>Francesco Villamena</i>		 <i>Guido Rini</i> 2 Marks	



MONOGRAMS, &c.  
used by the ITALIAN Engravers.

Plate III

		
Alexander Badile	Joseph Ribbert 1 <sup>st</sup> Espagnolel 3 Marks	Raphael Scamman
		
Lucas Cramberlans	Hercules Bergami 4 Cyphers	Alexander Algarbi
		
Pietro Testa	Giovanni Matteo Melli 1 Mark	Salvatore Rossi
		
Antonio Francese Lucani	Remigio Cantagrossi	Stefano Della Bella 1 Mark
		
Jaques Cellot	Julio Cesare Venuti	Benedetto Gastaldi 2 Cyphers
		
Antonio Maria Zanetti	Domenico Maria Benavente 2 Cyphers	Antonio Battistini 





# MUSIC.



PLATE I.

## MODERN TIME-TABLE.

One Semibreve.....  ... Rests or characters for Silence. —

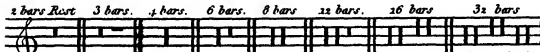
2 Minims.....  — — — 

4 Crotchets.....  — — — 

8 Quavers.....        

16 Semiquavers.....               

32 Demisemiquavers.....               

2 bars Rest 3 bars. 4 bars. 6 bars. 8 bars 12 bars. 16 bars 32 bars  
 *A point or des mesures a Note half as long again.*

## Characters for Time.


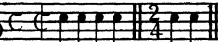

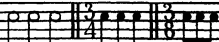
Common Time   Triple Time  


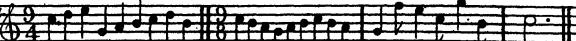
Fig Time in common Measure 

Fig Time compound or of Triple Time 

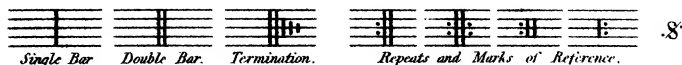
28. In the characters for Time which used to be called the Moods or Modes, where Figures are used, the upper Figure tells how many Notes there are in each Bar, and the under Figure tells of what kind:  $\frac{3}{4}$  implies 3 Crotchets or Notes so called in the Time Table  $\frac{3}{2}$  three Minims  $\frac{3}{4}$  three of the 4 Crotchets in the Time Table that are equal



# MUSICAL CHARACTERS.

PLATE II.

## GRACES AND MARKS OF EXPRESSION.



A Flat,  $\flat$ . Sharp,  $\sharp$ . Double Sharp,  $\times$ . Natural,  $\natural$ . Point or Dot,  $\cdot$ . Double Dot,  $\cdot\cdot$ .



$\text{sf.}$   $\text{rf.}$   $\text{f.}$   $\text{ff.}$   $\text{p.}$   $\text{pp}$   
*A Messa di voce. Sporzando. Rinforza. Forte Fortissimo Piano Pianissimo*





MUSIC.  
ARPEGGIO.

PLATE I

1 (Common Arpeggio)

2

3 Em. Bach

4

5

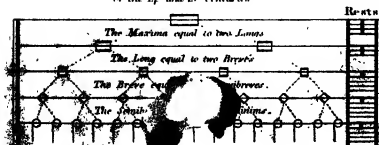
6

7

8

9

Ancient Musical Characters,  
of the 13<sup>th</sup> and 15<sup>th</sup> centuries



Arrangement of the set of Keys,  
on Keyd Instruments.

C <sup>#</sup> or D <sup>b</sup>	D <sup>#</sup> or E <sup>b</sup>	F <sup>#</sup> or G <sup>b</sup>	G <sup>#</sup> or A <sup>b</sup>	A <sup>#</sup> or B <sup>b</sup>	
C	D	E	F	G	A B C







ed at the *Liberty Bells* by Benjamin Hall, Rev. & Chas. Follen, etc.



# MUSIC.

PLATE IV

## THOROUGH BASE.

*Synonymous on several instruments with C#*

\* At the forehead of my muse by my lady has been smitten, and it may be placed by the 11. Notes with the flats

## DISSALLOWANCES IN THOROUGH BASE

No two 5<sup>ths</sup> or two 6<sup>ths</sup> must succeed each other, rising or falling together, diatonically

*Dissensions of 5<sup>ths</sup> and 6<sup>ths</sup>*

*Pedro Martin, Jaggu de Cont'apunto.*

*Fuchs*

*Allowances*

*Two 5<sup>ths</sup> or one 11, false, but better falling than rising*

*Two 6<sup>ths</sup> by contrary motion*

*Two 5<sup>ths</sup> by 11<sup>th</sup>*



**PLATE I**



And as the Act derives Ver's story by Longman Hurst, Row & Orme Publishers Rev



## COUNTERPOINT.

**I** **II** **III**

*Natural Harmony* *Three stops in the Organ, moving by major 2<sup>nd</sup> with the Diapason* *Harmony of 3<sup>rd</sup>, 5<sup>th</sup> & 6<sup>th</sup> in succession*

*Diapason*

*10<sup>th</sup> octave of 3<sup>rd</sup>*

*6<sup>th</sup> in succession*

**IV** **V**

*Scale of C major ascending* *Minor descending*

*Fundamental base to the Treble Scale*

*Minor Scale*



as the first step of the long run, there is a time, there is a time

Major continues

Scale in 3 parts with a suspended bar

1st part is divided by notes of 3rd and 6th

A Minor

Ascending Scale in the bass

descending

I

II

III

IV

V

CONFIDENTIAL.



Musical score for "MUSICAL COUNTDOWN". The score is written for piano (left hand) and violin (right hand). It features various musical notations including notes, rests, and dynamic markings. The score is divided into sections by double bar lines.

Section labels within the score include:

- To the Minor Scale.*
- Violin here to the Major Scale.*
- Scale.*

The score concludes with the title "MUSICAL COUNTDOWN" written vertically.

MUSICAL COUNTDOWN

MUSICAL







# MUSIC.

PLATE I.

*Sala.* *Introduction to the manner of disposing the several parts in Fugues à 3.*

*2 Subjects.*

*1<sup>st</sup> Subject.*

*2<sup>d</sup> Subject* *1<sup>st</sup> answer* *2<sup>d</sup> answer*

*Arrangement of the parts in Fugues à 4 for Voices, where 3 Tenor clefs are used.*



# MUSIC.

PLATE XI

## COUNTERPOINT

*4 Instrumental parts*

*Violino I<sup>mo</sup>*

*Violino II<sup>mo</sup>*

*Viola*

*Basso*

*Subject of a Chromatic vocal Figure in 4 parts*

*The manner of answering a Chromatic Figure in contrary motion and direct*



## PLATE XII

[illegible]



MUSIC.

COUNTERPOINT.

The Royle de l'Œuvre in 4 parts.

1<sup>st</sup> Treble  
2<sup>nd</sup> Treble  
Tenor  
Bass

3<sup>rd</sup> Treble  
4<sup>th</sup> Treble

2 Notes to one Bass  
3 Notes to one Treble

3 to one  
4 to one

is the other answer.  
is the first answer. Thus it is the first answer. Thus it is the first answer.



# MUSIC.

PLATE XIV

## COUNTERPOINT.

*Expansion and Resolution of Dissonance.*

1st p

2nd in 2 parts

in 3 parts

in 4 parts

4th in 2 parts

in 3 parts

in 4 parts



*As directed by the Art director*

*Adapted by Benjamin Hurst Rice, & Henry Farnsworth Rice*

6 1 - 12



# MUSIC.

PLATE IV

5<sup>th</sup> made a Diapad by the 6<sup>th</sup>

## COUNTERPOINT

The musical score consists of six systems, each with a treble and bass staff. The first system is labeled 'in 3 parts' and the second 'in 4 parts'. The third system is labeled '7<sup>th</sup> in 2 parts'. The fourth system is labeled 'in 4 parts'. The fifth system is labeled 'in 4 parts'. The sixth system is labeled 'in 4 parts'. The score includes various musical notations such as notes, rests, and accidentals.



# MUSIC.

PLATE XVI

## COUNTERPOINT.

*Ninth in 2 parts*

*No Ninth can be used in the descending Scale, as it cannot be properly prepared*

*in 3 parts*

*in 4 parts*

*Passing Notes The notes with the tails upwards are all that are essential to the harmony of the base, the rest are Figural Notes.*

*Supposed base to the Chromatic Scale*

*Roman's double major, or two ways of treating the 5 to the 4<sup>th</sup> as 2. In the first instance, the 5<sup>th</sup> is made a diatonic 4<sup>th</sup> in the second instance, the 6<sup>th</sup> is regarded as a diatonic 5<sup>th</sup>.*



# MUSIC.

PLATE III

## DOUBLE COUNTERPOINT IN THE OCTAVE.

*two Notes to one*

*Scale*

*Inverted*

*four to one*

*Scale*

*Scale*

*rivolto*

*Accompaniment* to the Scale which cannot be inverted as the 5<sup>th</sup> reversed becomes a 4<sup>th</sup>

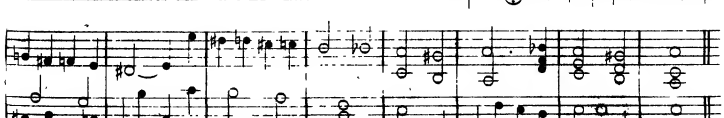
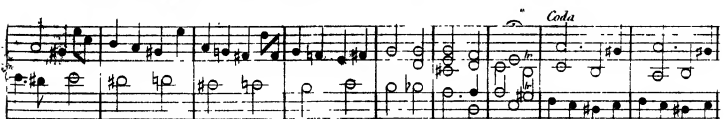


# MUSIC.

PLATE LVIII

*Contrappunto doppio, in genere "romantico."*

*Moderato*



*Coda*



PLATE XIV.



# MUSIC.

PLATE XX

*Contrappunto doppio in genere Cromatico continuato*

The musical score is written for two staves, Treble and Bass clef. It features a complex chromatic counterpoint. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is divided into measures by vertical bar lines. The key signature has one sharp (F#). The tempo/mood is indicated by the title as 'Contrappunto doppio in genere Cromatico continuato'. The score includes dynamic markings: *for* (forte), *p* (piano), *pp* (pianissimo), *dim c* (diminuendo), *ralen.* (rallentando), and *sf* (sforzando). The score ends with a double bar line and repeat dots.



# MUSIC.

## MODULATION

L. 1810. 222.

*In the ascending Scale only three Notes are in one Key.*

*Accompaniment to the ascending Scale in the base, in relative sounds without Modulation*

*Accompaniment to the Scale with Modulation*

*Modulation*

*Corelli*

*Unrelative Modulation Pergolesi*

*Mozart*



# MUSIC.

PLATE III

*Modulation from a given Note to every species of Interval in the Octave*  
C to C<sup>h</sup> or D<sup>b</sup> and back again.

This section contains five staves of musical notation. Each staff begins with a key signature change from C major to C major sharp (C<sup>h</sup>) or D major flat (D<sup>b</sup>). The notation includes various intervals and scales, with fingerings indicated by numbers 1-5. The exercises are designed to show how a single note can be modulated to every species of interval within an octave.

*Relative Keys*  
*immediately*

*mediately*

*North West passage to the half Note below any key*

This section contains four staves of musical notation. The first two staves are labeled 'Relative Keys immediately' and 'mediately'. The third and fourth staves are labeled 'North West passage to the half Note below any key'. The notation includes various intervals and scales, with fingerings indicated by numbers 1-5.

*Disappointed Closes.*

This section contains one staff of musical notation. The notation includes various intervals and scales, with fingerings indicated by numbers 1-5. The exercises are designed to show how a single note can be modulated to every species of interval within an octave.



# MUSIC.

PLATE XIII

*Roussseau's regular Modulation in the Key of C Major.*

Handwritten musical notation for Roussseau's regular Modulation in the Key of C Major. The notation is arranged in two systems, each with two staves (treble and bass clef). The first system shows a sequence of chords: C to G, C to A, C to E, C to F, and C to D. The second system shows: A to C, A to A, A to D, D to A, E to A, and F to F. Fingerings are indicated by numbers 1-5 above notes.

*Kimberger's two essential Chords*

Handwritten musical notation for Kimberger's two essential Chords. The notation is arranged in two systems, each with two staves (treble and bass clef). The first system shows a sequence of chords: 1 2, 6 5, 9 8, 4 3, 7 6, and 4 3. The second system shows: 1 2, 6 5, 9 8, 4 3, 7 6, and 4 3. Fingerings are indicated by numbers 1-5 above notes.

*Kimberger's examples of the first use of Discords*

Handwritten musical notation for Kimberger's examples of the first use of Discords. The notation is arranged in two systems, each with two staves (treble and bass clef). The first system shows a sequence of chords: 9 8, 7 6, 5 4, 9 8, 7 6, and 5 4. The second system shows: 9 8, 7 6, 5 4, 9 8, 7 6, and 5 4. Fingerings are indicated by numbers 1-5 above notes.



# MUSIC.

PLATE XXIV

*Product of the Chord of the extreme flat 7<sup>th</sup> commonly called the enharmonic Chord*

The first system contains variations I through VI, and the second system contains VII through XII. Each variation is presented in a two-staff format (treble and bass clef). The notation includes various chordal structures and melodic lines, with some variations featuring accidentals like flats and sharps.

*\*The lowest Notes of these Chords may be regarded as the Tenor part in octave with the Bass*

*Modern Chromatic in flats*

This section shows a single system of musical notation with a treble and bass staff. It features a chromatic scale in flats, with notes descending and then ascending, marked with various accidentals.

*In Sharps*

This section shows a single system of musical notation with a treble and bass staff. It features a chromatic scale in sharps, with notes ascending and then descending, marked with various accidentals.

*Moto continuo in A Minor à tre*

*à quatre*

This section shows a single system of musical notation with a treble and bass staff. It features a continuous motion (moto continuo) in A minor, with a complex arrangement of notes and rests.

*Complete Scale by true 5<sup>th</sup> in the triple progression, without double flats or sharps*

This section shows a single system of musical notation with a treble and bass staff. It features a complete scale by true 5th in the triple progression, without double flats or sharps.





## MUSIC.

Example of the *Pedantic* Genus, in which are expressed its *transitions* in the *chromatic scale* according and descending.

The musical notation consists of two systems of staves. The first system shows an ascending chromatic scale from C to G, with notes marked with a sharp sign (♯) indicating the chromatic movement. The second system shows a descending chromatic scale from G to C, with notes marked with a flat sign (♭) indicating the chromatic movement. The notation is presented in a simplified, schematic manner, focusing on the sequence of notes and their chromatic alterations.

First example of *passings* immediately from a  
Key-Note to the sharp 9<sup>th</sup> of another Key.

The musical notation shows a transition from the Key of D to the Key of E. The notation is presented in a simplified, schematic manner, focusing on the sequence of notes and their chromatic alterations. The transition is marked with a sharp sign (♯) indicating the chromatic movement.

Second example, immediately *passings* from any  
Key-Note to the key of its flat 2<sup>d</sup>.

It must be observed that to feel the effect of the sudden modulation it is necessary to remain a little while upon the *several chords*, before we pass to the third. This leads to another Transition, which I've mentioned well before, namely that this, to our use, is the harmony of every third which ends with every kind of movement, and another harmony quite different, which belongs only to *Allegros*. The *Pedantic* genus appropriate only to that.

## Accusature

The musical notation shows a complex sequence of notes and rests, representing the *Accusature*. The notation is presented in a simplified, schematic manner, focusing on the sequence of notes and their chromatic alterations. The sequence is marked with a sharp sign (♯) indicating the chromatic movement.



# MUSIC.

PLATE VIII

## FINGERING ON KEYED-INSTRUMENTS.

*Position of the hands.*

*Ascending & descending Notes, the two parts to be practiced separately.*

I

II

III

IV

V

VI

VII

VIII

IX



# MUSIC.

PL 111 Will

## Iteration in Fingering.

Aberrations

II. No. 100



# MUSIC.

PLATE LXX

Right hand.

Fingering of semitonic or chromatic divisions.

Right hand musical notation, showing semitonic and chromatic divisions with fingering numbers (1-3) and slurs.

Left hand.

Left hand musical notation, showing semitonic and chromatic divisions with fingering numbers (1-3) and slurs.

Exercises for the hands.  
Double Notes.

Double Notes musical notation, showing exercises for both hands with slurs and fingering numbers.





ST. JAMES CATHEDRAL

The image shows a musical score for a large ensemble, likely a cathedral choir or orchestra. The score is written on a large sheet of paper with a decorative border. It features multiple staves, each with various musical notations including notes, rests, and dynamic markings. The notation is dense and covers the entire page. The score is written in a style that is common in the early 20th century, with a focus on complex rhythmic patterns and a wide range of dynamics. The paper is aged and shows some signs of wear, including creases and discoloration. The overall appearance is that of a historical document, possibly a manuscript or a printed score from a specific era.





*Air upon three Notes, sent to the Author of this Air, by the late M. Roussau in his own hand writing*

*A la mode*

# Romance Air des trois notes.

Que le jour me dure, D'adieu loin de toi

toute la nature N'est plus rien pour moi Le plus verd boi

cege Quand tu n'y viens pas, c'est qu'il n'en faut voir, Pour moi sans appa

2. 3

Hélas, si je passe,  
 Un jour sans te voir  
 Je cherche ta trace.  
 Dans mon desespoir:  
 Quand je l'ai perdue,  
 Je reste à pleurer;  
 Mon ame éperdue,  
 Est près d'expirer.

Le cœur me palpite  
 Quand j'entens la voix:  
 Tout mon sang s'agite  
 Dès que je te vois.  
 Ouvres-tu la bouche  
 Les Cieux vont s'ouvrir:  
 Si ta main me touche,  
 Je me sens frémir.





harp  
 not, ye  
 hear you while yet it is dark to please and a - wake only stand I hear you  
 Tim Carol, and Ryno, voices of the days of old; let me  
 Placido: blazes when the moon a dull shield from the East, as rolls a - long, the  
 rustling in thy leaves, when are the steps of the dead in the dark eddying  
 head to night by winds, I have no sound in this, as there no quiet winds about now  
 gleam, amidst his dark brown years given them of the hall of ghosts that wander thy  
 Night that wears the light by even - long sound the joy of 'great' be long to  
 find it that on the sand of gleam is to fold in Mist I hear thee to hand in my  
 son of - Alphon, strike the string to those ought of joy in the harp  
 I learn a rule she looked from her bustling soul on the King, and such as once he heard  
 blue eyes rolled in tears But when she came to the rock that daily covered  
 sad and slow reversed and - mada to learn of the stream she went and up the sand the

Original Melodies to the Hymn of Ogham in Tennyson.

MUSIC.



Published at the direction and under the supervision of the Board of Directors of the University of California Press



# MUSIC.

## Canon in ogni modo recte, retro, ed a rinverso

In this kind of Composition, there must be no pointed notes recte, and round flats, sharps naturals or tritones, in the melody nor *altos*, appoggiatures or passing notes in the harmony: neither does the kind of composition admit of minor keys.

Recte

Retro

a rinverso

Canon Cancheri-cando, in which the base begins at the end and moves backwards like a Crab

Recte

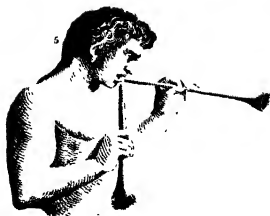
The complete set of Keys on the Piano Forte in present use, with additional keys at the bottom as well as the top. N.B. No Clefs are used in this complete CANON, or Scale of appreciable sounds except the base and treble, which are removable to different lines but on whatever line the base Clef is placed, it makes that line F, and the treble G.

Recte



# ANCIENT MUSICAL INSTRUMENTS.

PLATE I.

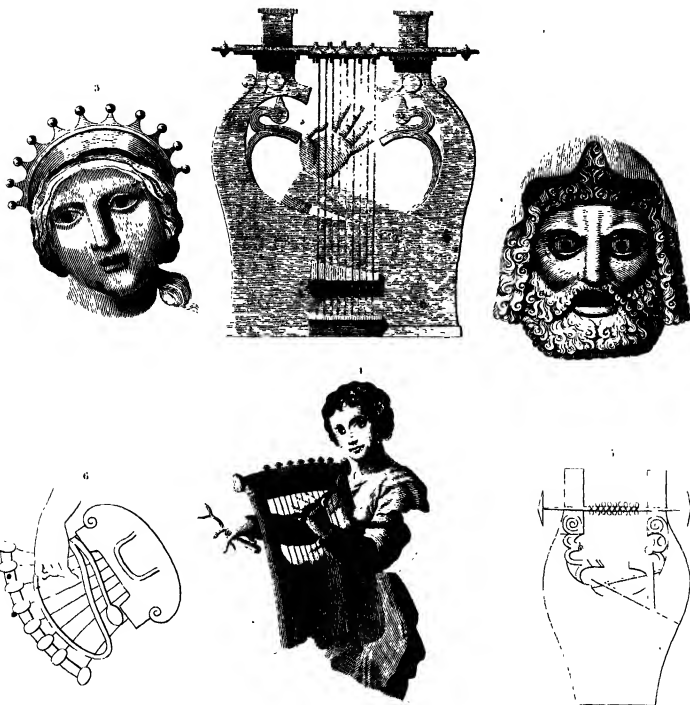


1. A Tympanon, or Tambour de Bass.
2. A Citharetta, or female minstrel.
3. A double Flute.
4. Two players on the Flute.

5. A Pachel playing on the Flute of the same pitch; Tibia piper.
6. A single Theatrical Flute.
7. A genuine ancient instrument.
8. A genuine ancient instrument.

See also the Flute, which is known as the Flute of the Flute.





1. A beautiful Greek *Barbiton*, or *Barpe*, from a bas-relief, a cast of which is in the Royal Academy. In *Antiqu. Musiq.* in the *Rev. L. M.* 1822, fasc. 1, under *Barbiton*. See *Arch. Vienn.* &c. for a similar example.

2. A Mask of the *Heracles* given by *Barpe* to the *Palais. Phil.* in 1800.

3. A Mask of *Thersites* given by *Barpe* to the *Palais. Phil.* in 1800.

4. The figure is in the 12<sup>th</sup> Plate of the 1<sup>st</sup> Vol. of the *Heracles* *Parade*.

5. & 6. Lyres from 3<sup>rd</sup> *Wm. Hamilton's* last collection of *Vases*.

"The 5<sup>th</sup> is the 1<sup>st</sup> direct image of the *Barpe* in the *Palais* in 1800.

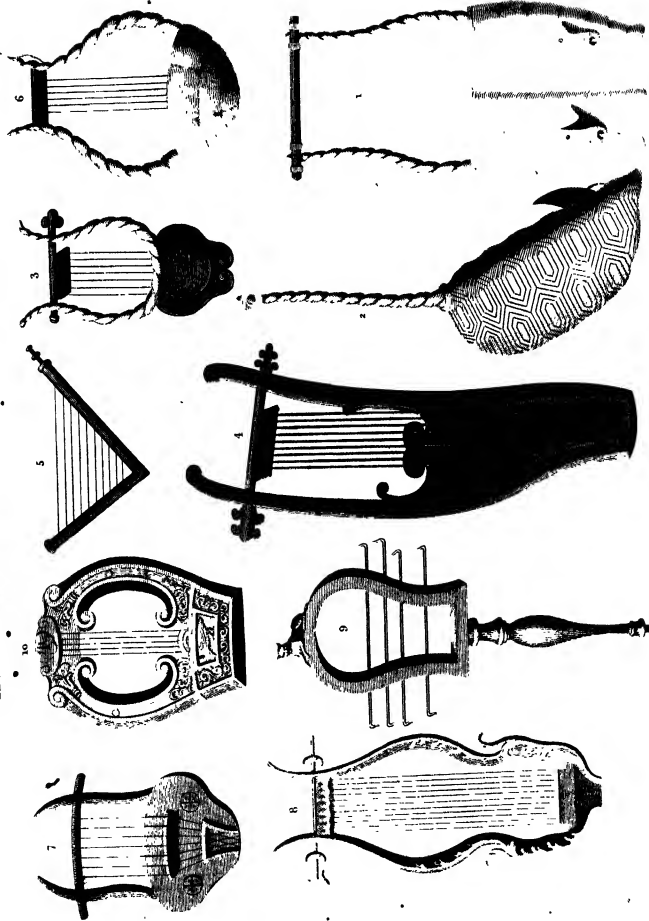




1, 2 & 3 are all taken from the same "pave" or "Ancient sculpture in the Vatican Palace at Rome, representing a group of Musicians performing an Epithalamion.  
 4. The Tuba or long Trumpet, called by the Hebrews the Trumpet of the Jubilee, to be seen on the Arch of Titus and on Trajan's Pillar.  
 5. Capid playing on a double Flute or Tibia, from an Ancient painting in the Museo at Portici.  
 6, 7, 8 & 10 From Egyptian paintings in the Tombs of the Kings at Thebes &c. Drom. Pl. 55. Nr. 26 27 28 30 & 31.  
 11. From an Egyptian painting in the Tomb of the Kings at Thebes &c. Drom. Pl. 55. Nr. 26 27 28 30 & 31.



# ANCIENT MUSICAL INSTRUMENTS.



1. The *Harpa* from a *Monument* by *St. Peter*  
 2. *Lyre* with *"Straw"*  
 3. *Lyre* with *"Straw"* *Straw*  
 4. *Lyre* with *"Straw"* *Straw*  
 5. *Lyre* with *"Straw"* *Straw*  
 6. *Lyre* with *"Straw"* *Straw*  
 7. *Lyre* with *"Straw"* *Straw*  
 8. *Lyre* with *"Straw"* *Straw*  
 9. *Lyre* with *"Straw"* *Straw*  
 10. *Lyre* with *"Straw"* *Straw*

1. The *Harpa* from a *Monument* by *St. Peter*  
 2. *Lyre* with *"Straw"*  
 3. *Lyre* with *"Straw"* *Straw*  
 4. *Lyre* with *"Straw"* *Straw*  
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 6. *Lyre* with *"Straw"* *Straw*  
 7. *Lyre* with *"Straw"* *Straw*  
 8. *Lyre* with *"Straw"* *Straw*  
 9. *Lyre* with *"Straw"* *Straw*  
 10. *Lyre* with *"Straw"* *Straw*



INSTRUMENTS OF MUSIC.  
INDIAN MUSICAL INSTRUMENTS.

PLATE V



Fig. 1.

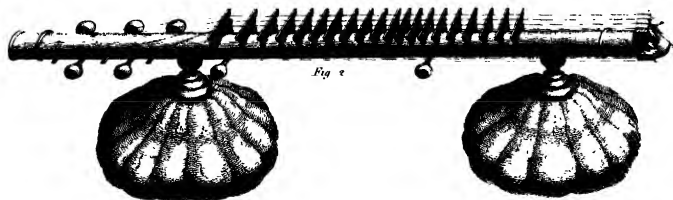


Fig. 2.

Fig. 1. From an original Indian Painting.

Fig. 2. The Beej, an Indian Musical Instrument, as described by Sir William Jones  
in a discourse on the subject, in the Asiatic Researches, Vol. 1. P. 295.

Published at the 'Asiatick Sept' 1786 by Benjamin Haug & Co. Printers in Row

6. 1st ed.



# INSTRUMENTS OF MUSIC.

PANDEIN MINSTRELS, IN PERFORMANCE AT FAIR-HALL.



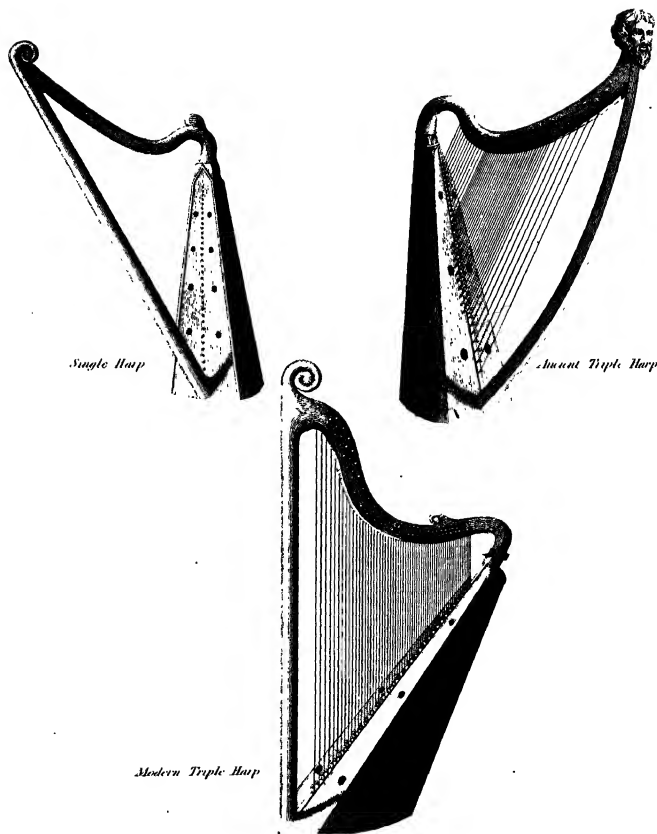
Printed and sold by the Pandain Minstrels, at the Pandain Hall, Pandain, Pandain.



MUSICAL INSTRUMENTS.

PLATE VII.

WELSH HARPS.



*Single Harp*

*Ancient Triple Harp*

*Modern Triple Harp*



# MUSICAL INSTRUMENTS.

PLATE VIII

## ORIGIN OF THE BOW.



Fig. 1



Fig. 2

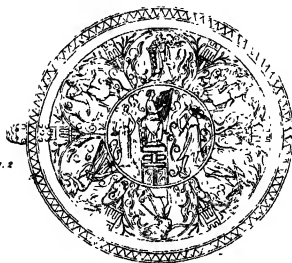


Fig. 3



Fig. 4

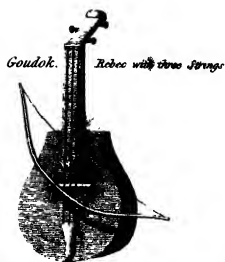




# RUSSIAN MUSICAL INSTRUMENTS.

PLATE IX

From the Russian Antiquities, by M. Guthrie, Physician to the late Empress Catherine.



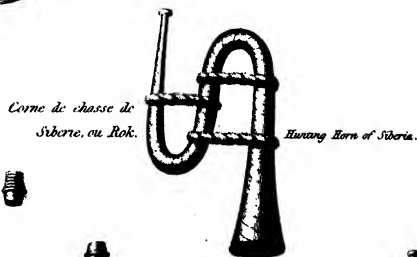
Goudok. Rebec with three Strings



Gélake.



Double Flutes of the Ancients.



Corne de chasse de Sibérie, ou Rok.

Hunting Horn of Siberia.



Reyok.



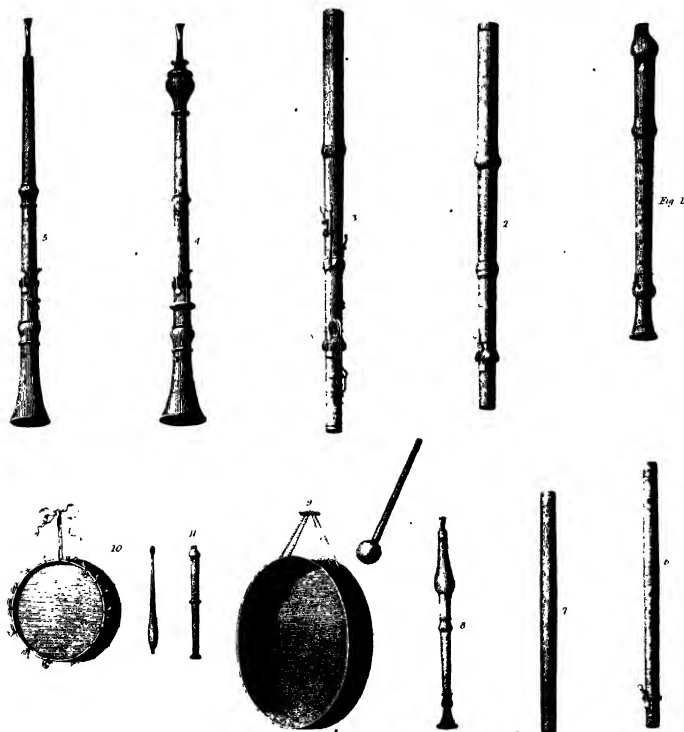
Batalaika. Guitar with two Strings.











1. English Common Flute

2. German Flute

3. Improved German Flute with additional keys

4 & 5. Keyholes

6. B. Flute

7. C. Flute

8. English Flageolet

9. Gong

10. K. H. Tabour & Pipe

See also page

Published as the Act directs by the Stationers, Printers, and Booksellers, in London.



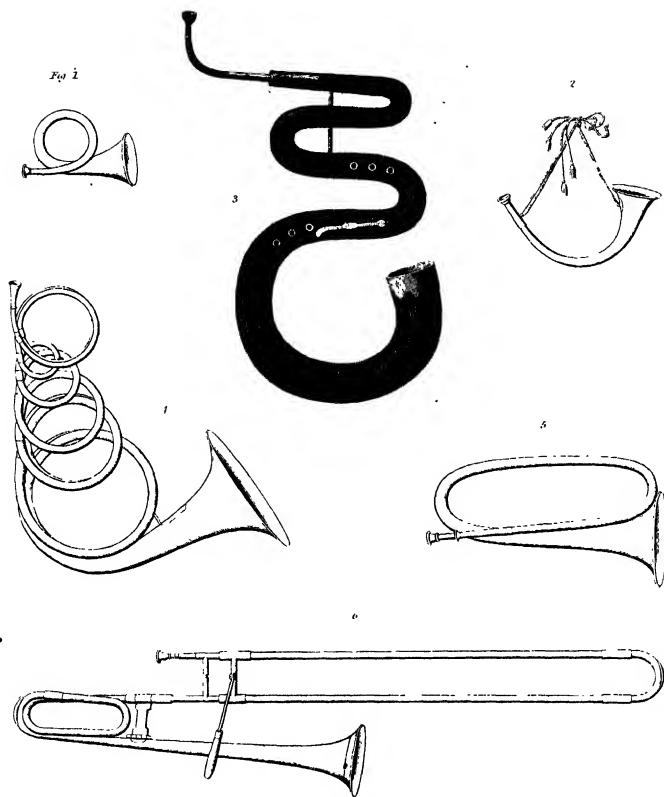


Fig. 1. 2. Horns. 3. Euphonium. 4. French Horn. 5. Trumpet. 6. Tuba.



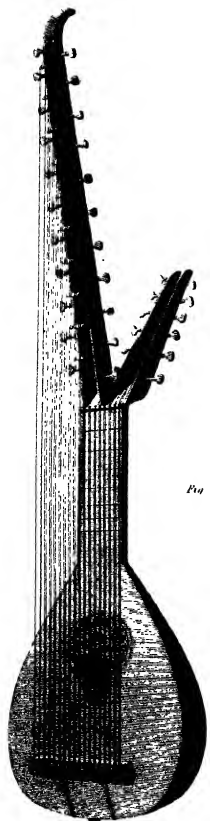


Fig 1



Fig 2



Fig 3

Fig 1. Arch Lute height  $5\frac{1}{2}$  In the Collection of the late M<sup>r</sup> D. Walker Fig 2. Mandoline the distance from Bridge to Nut same as Violin  $1\frac{1}{2}$  Fig 3. Mandola same in length from Bridge to Nut according to its pitch

PLATE XIII



# MUSICAL INSTRUMENTS.



Fig. 1 & 2 Violin and Bow Fig. 3 Sordane or Mute Fig. 4 Violoncello

Fig. 5 Violino Piccolo or Kite Fig. 6 Viol de Gamba 17th Century

Published as the Act directed, Jan'y. 1823 by Longman, Hurst, Roe, & Green, Stationers, &c.





Fig. 1



Fig. 2



Fig. 3



Fig. 4

Fig. 1 Viol. A. Amour height  $\frac{7}{8}$  In

Fig. 2 Mandolin

Fig. 3 Spanish Guitar height  $\frac{7}{8}$  In

Fig. 4 Lute height 15 In

Not less ready



